

1 IN THE UNITED STATES DISTRICT COURT

2 FOR THE SOUTHERN DISTRICT OF TEXAS

3 MCALLEN DIVISION

4 UNITED STATES OF AMERICA § CASE NO. 7:19-CV-403
5 VERSUS § MCALLEN, TEXAS
6 WE BUILD THE WALL, INC., ET AL § FRIDAY,
§ JANUARY 3, 2020
§ 10:06 A.M. TO 1:46 P.M.

7 PRELIMINARY INJUNCTION HEARING

8 BEFORE THE HONORABLE RANDY CRANE
9 UNITED STATES DISTRICT JUDGE

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12 APPEARANCES: SEE NEXT PAGE

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19
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21
22
23
24
25

INDEXWITNESS:DirectCrossRedirectRecross

DR. UNNIKRASHNA
By Mr. Warner
By Mr. Courtois
By Mr. Pena

12	.	77	.
.	48	.	88
94	.	.	.

MR. MARTINEZ
By Mr. Warner
By Mr. Courtois

100	.	.	.
.	110	.	.

MR. THOMPkins
By Mr. Pena
By Mr. Courtois

117	.	153	.
.	150	.	.

EXHIBITS:MarkedOfferedReceived

(None offered.)

1 MCALLEN, TEXAS; FRIDAY, JANUARY 3, 2020; 10:06 A.M.

2 THE COURT: Let me start with -- let me just get an
3 -- 19-CV-403, which is the United States of America versus
4 the Fisher Industries and others.

5 Who's here and who do you represent?

6 MR. WARNER: Good morning, Your Honor. Paxton
7 Warner and John Smith on behalf of the United States of
8 America. And, with the Court's permission, agency counsel
9 for the international boundary and water commission Rebecca
10 Rizzuti is sitting at counsel table with us.

11 THE COURT: All right.

12 Yeah.

13 MR. COURTOIS: Mark Courtois here for the Fisher
14 Defendants.

15 THE COURT: All right.

16 MR. KIRBY: Lance Kirby here for Neuhaus and Sons.

17 THE COURT: All right. And so we're here this
18 morning for the request for preliminary injunction. I
19 understand there's going to be one witness, is all?

20 MR. WARNER: Your Honor, the United States has one
21 witness to update the Court on where we are and what the
22 process is going forward, so that the Court will have
23 hopefully a better understanding of why the Government is
24 asking for the preliminary injunction.

25 THE COURT: Sure.

1 And any witnesses from either of the Defendants?

2 MR. COURTOIS: Yes, Your Honor. Fisher will have
3 at least two witnesses.

4 THE COURT: At least two. All right. So a total
5 of three.

6 All right. If you-all could take a seat, let me
7 just check on the other case.

8 19-CV-411 North American Butterfly Association et
9 al, versus Neuhaus and Sons LLC, et al. Announcements for
10 the Plaintiffs first.

11 MR. PENA: Javier Pena for the Plaintiffs, Your
12 Honor.

13 THE COURT: All right.

14 MR. COURTOIS: Mark Courtois, here from the Fisher
15 defendants.

16 MR. KIRBY: And Lance Kirby here for Neuhaus and
17 Sons, LLC.

18 MR. OLIVEIRA: And David Oliveira here for We
19 Build the Wall.

20 THE COURT: Do you have some witnesses that you
21 intend to call this morning?

22 MR. PENA: Yes.

23 THE COURT: And how many do you --

24 MR. PENA: One. One witness.

25 THE COURT: One witness. Is that lay or an expert

1 witness?

2 MR. PENA: Expert witness, Your Honor. I think
3 the majority of the witnesses will be experts this morning.

4 THE COURT: One of the questions I have in your
5 case is where's the property at issue? I thought it was
6 north of the levee wall, last time you came here and said,
7 well it's north and south of the levee wall, it goes all the
8 way down to the river.

9 MR. PENA: Yes, Your Honor.

10 THE COURT: Evidence of that seems a little -- we
11 are a little uncertain, unless that's something the Defense
12 -- the Defense is just going to stipulate or agree to. The
13 legal description, sorry you -- it's latitudes and
14 longitudes, so many minutes here and I couldn't figure it
15 out just looking at it, so --

16 MR. COURTOIS: Your Honor, we do have a --

17 THE COURT: -- that may be an issue or maybe not.

18 MR. PENA: We don't believe it is, Your Honor. I
19 think it's pretty clear --

20 THE COURT: All right. It may not be.

21 MR. PENA: There's two tracts of land. One that
22 is north of the levee and then the second tract is between
23 the levee and the river. And we do have an overlay with an
24 outline of the property that goes all the way to the river,
25 Your Honor.

1 THE COURT: There were three parcels that were
2 identified in your pleading.

3 MR. PENA: I believe that three is for the
4 Defendant's Neuhaus property.

5 THE COURT: There was also three for them. I
6 thought -- I could be wrong, but I thought they were three
7 and three, much smaller pieces again, sections irregular in
8 size and it had some metes and bounds sort of type -- or
9 actually longitude and latitude and maybe there's not an
10 objection to it.

11 MR. COURTOIS: We have a map from the Hidalgo
12 County Appraisal District which identifies the properties.

13 THE COURT: All right. So no dispute.

14 MR. COURTOIS: I have a copy I can provide the
15 Court if he wants so he can follow it.

16 THE COURT: Okay. Again, I just wasn't sure, but
17 it sounds like maybe that can be worked out or not in
18 dispute.

19 MR. COURTOIS: No objection, Your Honor.

20 THE COURT: So we'll get to that.

21 So I have two evidentiary hearings I need to
22 conduct. I was thinking that there might be some
23 efficiencies in the common witnesses, but I don't think
24 there's going to be common witnesses, so I need to pick who
25 gets to go first and who gets to wait.

1 MR. PENA: We actually did talk about that, Your
2 Honor. And there are going to be -- at least Fisher is
3 going to have a common witness. So we talked about
4 combining it, just for efficiency.

5 THE COURT: Sure.

6 MR. PENA: But it's up to the Court's discretion.

7 THE COURT: No. I'm all for efficiency. I mean
8 that's why I set them both at the same time.

9 MR. COURTOIS: Yes, Your Honor. My thought is, is
10 that the witnesses that I would have for first hearing are
11 going to be the same witnesses, the same evidence for the
12 second hearing.

13 THE COURT: Sure.

14 MR. COURTOIS: For efficiency purposes, I only
15 want to present that evidence once in Court.

16 THE COURT: Absolutely. Sure.

17 MR. COURTOIS: And so I think from my perspective
18 it would certainly speed things up if these witnesses were
19 allowed to testify in both hearings and both matters were
20 combined for purposes of this hearing.

21 THE COURT: All right. Does anybody have any
22 objection to proceeding that way?

23 MALE SPEAKER: No objection.

24 MALE SPEAKER: No objection.

25 THE COURT: Okay. So we'll just combine the

1 hearings. Whatever evidence is elicited here or presented
2 may be used in both cases as needed.

3 So I'm going to start with the Government's since
4 their case is a little further along. So why don't you-all
5 take a seat.

6 Mr. Warner, do you want to -- if you wouldn't
7 mind, first, giving me sort of an overview of where you are
8 on the case, and then explain to me your witness and his or
9 her relevance to issues that remain.

10 MR. WARNER: Yes, Your Honor.

11 Since we were last in court, Your Honor, we were
12 able to get information -- we actually provided three
13 different sources of possible LIDAR information that Fisher
14 Industry utilized. One of them didn't work, I don't know
15 whatever happened with the US Geological Survey website, but
16 regardless, on December 16th, we were able to send Fisher
17 industries a hard drive that contained the LIDAR information
18 that they needed to plug into their model and make it run.
19 They actually received that on the 18th, because
20 unfortunately there was horrible weather in Memphis and
21 FedEx couldn't keep it's promise to us.

22 We then waited, beginning on December 18th.
23 Finally on December 30th, we received the first 2-D model
24 which was the existing conditions, so the land without their
25 proposed construction on it. Then on December 31st, we

1 received the second 2-D model with what we called the
2 proposed conditions, which would be their wall.
3 Additionally, later then, we got the actual report that
4 accompanied the models, so we are in the process of
5 reviewing that now -- we being the International Boundary
6 and Water Commission -- is in the process of reviewing that.

7 And I would like to call for the Court,
8 Dr. Polinary Unnikrashna, who is the lead or managing
9 engineer at the International Boundary and Water Commission,
10 just simply to explain to the Court what happens now. What
11 he and his staff are doing, how long that will take so that
12 the Court can understand that. And then, if the Court has
13 any questions as well, he can answer those. And then at
14 that point that would be the extent of my evidence, Your Honor.

15 THE COURT: And the 2-D modeling with -- you
16 called it a wall, but I think it's a fence, right?

17 MR. WARNER: Fence. Yes.

18 THE COURT: All right. Because when you're here
19 on the other side you always call it a fence, so I'm kind of
20 curious well why are you now calling it a wall, but it's a
21 fence.

22 MR. WARNER: It is a fence.

23 THE COURT: And so the 2-D modeling for the fence
24 that was provided to you is in your understanding that, that
25 is Fisher's attempted compliance with the necessary modeling

1 that they needed to submit to get approvals for the
2 projects.

3 MR. WARNER: So they have -- they have done what
4 we asked them to do which was to supply the 2-D modeling for
5 our review and assessment.

6 THE COURT: All right.

7 MR. WARNER: Part of what the Court will hear is
8 that there are then technical comments that are made by the
9 International Boundary and Water Commission which may
10 require additional evidence. It may require clarification;
11 it may require just additional calculations just so that
12 they can be International Boundary and Water Commission can
13 complete it's review. Then confer with Mexico and then
14 issue it's letter; either no objection or we need
15 modifications or there's just full objection.

16 THE COURT: All right. So let's hear then from
17 your witness on that.

18 MR. WARNER: Okay.

19 THE COURT: And get the timetable for that.

20 MR. WARNER: Then at this point, Your Honor, the
21 United States would call Polinary Unnikrashna.

22 THE COURT: All right. Before we begin, I need to
23 have the oath administered to you. If I could get you to
24 stand by the microphone so we can pick up the audio and just
25 raise your right hand and be administered the oath.

1 (Witness sworn.)

2 THE COURT: All right. You can, please, be seated
3 over here.

4 All right. If I could get you to identify
5 yourself and spell your last name for us, please?

6 THE WITNESS: My name is Polinary Unnikrashna I am
7 the chief of the engineering services division of the US
8 section of the International Boundary and Water Commission.
9 It's U-N-N-I-K-R-I-S-H-N-A.

10 THE COURT: Great. All right. Mr. Warner, you
11 may begin your examination of Dr. Unnikrashna.

12 MR. WARNER: Thank you, Your Honor.

13 DIRECT EXAMINATION OF DR. UNNIKRASHNA
14 BY MR. WARNER:

15 Q Doctor, do you have a more common name that you go by
16 that's a little easier to pronounce?

17 A Dr. Uni.

18 Q And do you mind if I call you that during the hearing
19 today?

20 A That's fine.

21 Q Thank you. Okay. Dr. Uni, how long -- what are you
22 officially, what type of engineer?

23 A I'm a civil engineer. I've been working in the area of
24 water for about 35 years.

25 Q Okay. And where did you obtain your PhD?

1 A I finished my doctorate at the Utah State University
2 and Utah Water Research Lab in Logan, Utah.

3 Q Okay. And how long have you actually been working at
4 the International Boundary and Water Commission?

5 A Eight years.

6 Q And so what year does that mean you joined?

7 A I joined in October 2011.

8 Q And what was your title when you joined in 2011?

9 A I was the lead hydraulic engineer.

10 Q And what is your current title?

11 A I am the chief of the engineering services division.

12 Q How long have you been the chief of the engineering
13 services division?

14 A Since fall of 2013.

15 Q Okay.

16 A Five years.

17 Q Dr. Uni, what do you do as part of your duties as the
18 chief?

19 A I manage the design and construction divisions of the
20 engineering services division. (Indiscernible) projects
21 that we work on design projects, construction projects.
22 With the design projects we have contractors who perform the
23 designs -- we do some of the designs in house -- and for
24 construction projects that are, you know, contractors work
25 on the levees. We have a lot of proponents who submit their

1 project details to us. We review those project details and
2 show that there are no adverse impacts to either the US or
3 Mexico.

4 Q And does the International Boundary and Water
5 Commission have a certain procedure or protocol with regard
6 to projects and how those projects are submitted for review?

7 A Yes.

8 Q And could you just briefly tell the Court what that is?

9 A Basically --

10 THE COURT: Can I get you to hold the microphone a
11 little closer to you, I'm having trouble hearing you.

12 THE WITNESS: Okay, Your Honor.

13 BY MR. WARNER:

14 A The proponent submits the documents to our realty
15 specialist in the Rio Grande office. And the realty
16 specialist distributes the project to the different
17 divisions of the agency. They could be the -- they are the
18 engineering services division, the environmental management
19 division, and the operations station.

20 Each of these divisions conducts a review of the
21 submitted material, reviews typically take about three
22 weeks. And then after that the comments are sent back to
23 the proponent. The proponent addresses those comments, and
24 we go back and forth a couple of times, and then if there
25 are no issues, then realty specialist issues the no

1 objection.

2 THE COURT: And give me a typical example of
3 somebody that would come to you and submit this information
4 for your review?

5 THE WITNESS: For example, it could be
6 municipalities, it could be irrigation districts they could
7 be Customs and Border Protection for their fence projects.

8 THE COURT: So if they were going to build, let's
9 say a boat ramp, would they come to you for that --

10 THE WITNESS: Yes.

11 THE COURT: -- or not something like that?

12 THE WITNESS: Yes.

13 THE COURT: Even a boat ramp?

14 THE WITNESS: Yes.

15 THE COURT: How about a dock?

16 THE WITNESS: A dock and (indiscernible) for
17 example. Also, sometimes you have pipelines going across
18 the Rio Grande carrying, you know, hydrocarbons and natural
19 gas, those kind of proponents come to us. That bank comes
20 to us with their projects on sanitation on both sides of the
21 border.

22 THE COURT: Now let's suppose a farmer wants to
23 put up a barbwire fence, it's within the floodway, is that
24 something they actually have to come to you for?

25 THE WITNESS: Yes.

1 THE COURT: Even something so -- what might seem
2 minor in comparison to these other examples and a barbwire
3 fence, they would have to get approval to put up a barbwire
4 fence?

5 THE WITNESS: What we do in those cases, Your
6 Honor, is that you have discussions with the Mexican
7 section. They come to us with a project and we -- what
8 happens is once it's a project in the Rio Grande Floodplain.
9 Once we review it, if it's a simple project, it doesn't
10 require modeling. Once we review it, we have a civil
11 engineer who writes to the Mexican section civil engineer.
12 And then Mexican section conducts their review and their
13 principle engineer responds to our principle engineer saying
14 that we agree with you that there are no impacts. Then they
15 come to a commissioners exchange letters and then the Realty
16 Division issues a no objection letter to the proponent.

17 THE COURT: And when a farmer, let's say they're
18 going to -- they decide they're going to -- they're going to
19 farm some land that's in the floodway, and so they need to
20 build irrigation trenches around the property -- let's say
21 sugar cane they're going to need the flood irrigated or
22 whatever. And so they're going to build those trenches.
23 There may be three feet -- just the ones I've seen I'm just
24 giving an example -- to build those kind of trenches,
25 irrigation trenches, on their property, would they need to

1 come to the IBWC to get approval?

2 THE WITNESS: If it is something within the
3 floodplain of the Rio Grande, yes.

4 THE COURT: Then absolutely. So no matter what it
5 is, if it's in the floodplain they have to come get your
6 approval. Yes?

7 THE WITNESS: Yes, sir.

8 THE COURT: Now there's also some development in
9 the flood plain, I think there's even like a mobile home
10 park and Chimney Park area. There's a city park, now the
11 city of Mission owns, and I believe is down within the levee
12 wall that has a fence -- a brand new fence around it or
13 maybe a few years old now. Anytime anything like that is
14 going on, someone's putting up a fence -- as long as it's
15 within the floodplain they had to come get your permission?

16 THE WITNESS: Yes.

17 THE COURT: If they're going to plant a tree in
18 their yard in Chimney Park, do they have to come to your --
19 let's say they want to put in a little Washingtonian maybe
20 10 feet tall to beautify their area, if they have to come to
21 you and get permission to put up a tree?

22 THE WITNESS: As an example, Your Honor, there is
23 these towers that does, you know, for example CBP sometimes
24 tries (indiscernible) flood plain. And we would give it to
25 the Mexican section that if it's a small structure with a

1 very small footprint in a live floodplain, it should not
2 require any modeling system.

3 THE COURT: Right.

4 THE WITNESS: If even by both -- you know, both
5 sections of the commission that it's not going to cause an
6 impact.

7 THE COURT: But so they still have to come to you
8 with that, for your permission?

9 THE WITNESS: Yes.

10 THE COURT: And so even a landowner say within
11 Chimney Park wants to put a tree in their front yard, they
12 would have to come to you and get permission to plant a
13 tree? I'm just trying to learn here -- I'm wondering how
14 far this goes. You said anybody in the floodplain, does
15 anything has to get your permission.

16 THE WITNESS: I don't know what the cutoff point
17 is, Your Honor.

18 THE COURT: All right.

19 All right. You may continue.

20 BY MR. WARNER:

21 Q Dr. Uni, are you aware does Chimney Park have a permit
22 or a license from the IBWC for its mobile home park?

23 A I'm not aware.

24 Q Okay. Dr. Uni, when did you first become aware of
25 Mr. Fisher's project down here on the Neuhaus property?

1 A I think it is in mid-November or so, but we did have a
2 meeting on October 3rd, at the El Paso office.

3 Q Okay. Do you remember who was at that meeting?

4 A Mr. Tommy Fisher was there, Mr. Greg Ginch (phonetic)
5 and commissioner Jayne Harkins of the US (indiscernible),
6 the principle engineer Jose Nunez, the chief of the head of
7 the engineering department, then I was there, and also the
8 chief of the environment management division
9 (indiscernible).

10 Q And do you know what was discussed on October 3rd when
11 you were at that meeting?

12 A Yes. Mr. Fisher showed us a PowerPoint presentation on
13 his concept of the fence, the border fence. And that was to
14 be on the bank of the Rio Grande and it's going to -- a
15 couple of things I remember is that it was a very different
16 material, that is galvanized steel, I think, as compared to
17 the CBP fence. And it also didn't have the steel plate on
18 the top, it was pointed bollard.

19 Q Okay.

20 A And it's also maintenance.

21 Q Do you know -- do you know what the purpose of that
22 meeting was on October 3rd?

23 A I think it was to present to Commissioner Jayne Harkins
24 the, you know, the projects that they were proposing to do
25 and Principle Engineer Jose Nunez then explained the steps

1 that are required by project proponent for these kinds of
2 projects.

3 Q And do you recall specifically any of the steps that
4 Engineer Nunez told them would be required on October 3rd?

5 A Yeah. Basically, as I recall he said that, you know,
6 project documents had to be submitted to the realty
7 specialist, a Mr. John Claudio, who is in the office and
8 then they'll be distributed to the divisions for review.

9 Q Did that include the 2-D modeling?

10 A I don't think we got into that at that level of detail,
11 but it was conveyed that, you know, if the modeling needs to
12 be done, then they can consult with us and we can sit and
13 discuss the methodology.

14 Q Is it your experience that projects that are proposed
15 in the floodway, when they come to the International
16 Boundary and Water Commission, is it collaborative between
17 the engineers?

18 A Yes.

19 Q Of the --

20 A Yes. Yes. Yes.

21 Q Okay.

22 A Yeah.

23 Q When you left that meeting on October 3rd were you
24 anticipating that you would receive some sort of a proposed
25 project from Mr. Fisher?

1 A I think, at that time, he was just talking about
2 proposed projects not a particular project that is my
3 recollection.

4 Q Okay. So when do you first remember hearing then about
5 Mr. Fisher's proposed project on the Neuhaus property here
6 in the Rio Grande valley.

7 A I think, on the November 13th or something, I received
8 two PDF documents, I think, it is in the timeline that you
9 -- on November 13th, I received two PDF documents and then I
10 distributed that to internally with my colleagues.

11 Q Now did those documents that you received, do they meet
12 any of the requirements that the International Boundary and
13 Water Commission would need in order to consider the project
14 being proposed by Mr. Fisher?

15 A It conveyed basic information but did not have any
16 digital hydraulic models or, you know, that info -- the
17 detailed information.

18 Q All right. And then did you respond to that email when
19 you received it?

20 A Either me or my lead hydraulic engineer Dr. Apurba
21 Borah would have responded.

22 Q Okay. And what was the response?

23 A The response sent on November 13th I think is we
24 emailed them the request for hydraulic analysis and report.

25 Q So earlier when the Judge questioned you, you said that

1 some things don't require a hydraulic analysis, but others
2 do. Is this the type of project that would require that
3 analysis?

4 A Yes. We have not received a project with this long of
5 a fence exchange of 3.5 miles so close to the bank of the
6 Rio Grande before.

7 Q Okay. So then when was your next contact that you're
8 aware of?

9 A After that, on November 19th, I believe a US person
10 sent Mr. Ginch the SNB 2008 hydraulic model which is the
11 latest hydraulic model we had for this region of the Rio
12 Grande and he also sent them the report from that model.

13 Q okay. What is the -- you said SNB, what is that?

14 A SNB infrastructure is a consulting firm in the Rio
15 Grande.

16 Q Okay. And it was some sort of a model that they were
17 going to need in order to do their model?

18 A No. We would just say that this is the latest
19 hydraulic information we have in this region of the Rio
20 Grande. Because it's a new model it starts from Penitas
21 where the levee system begins and goes all the way down to
22 Brownsville, and they also have models for the interior
23 floodways in the US and Mexico.

24 Q When was the next time then that you or the IBWC
25 communicated with Mr. Fisher's group?

1 A After that, Mr. John Claudio on November 26th emailed
2 the 2-D model methodology to Fisher --

3 Q And why is --

4 A -- Industries.

5 Q Why is the methodology important?

6 A The methodology is important because, when you start
7 doing a detailed hydraulic modeling such as a 2-D, there are
8 different ways in which you can do it, and so both the
9 parties have to have a common understanding of what is being
10 done. So that either party's not wasting time.

11 So, for example, when he had CBP do their 2-D modeling
12 for the factor down to Penitas engineers and we discussed
13 the modeling methodology in detail. The methodology
14 includes -- mostly the proponents develop the methodology.
15 In this case, because some construction had begun on the
16 site, or some site work had begun, we developed the
17 methodology ourselves and shared it with the proponent.

18 When we we're doing the methodology we look at the data
19 required which is the LIDAR data, the kinds of flows that
20 come into that need to be analyzed. In this case, it is a
21 hydrograph based on Hurricane Beulah and then the
22 coefficients to be used. It has coefficients, you know, the
23 values that you give to the surfaces depending upon the
24 smoothness, for concrete you have a very low value. If it's
25 a dense vegetation, it has a higher value. Those kinds of

1 details.

2 And most importantly how to calculate the
3 hydraulic impacts. The hydraulic impacts are the increases
4 in water surface accelerations due to a proposed project.
5 It is also the calculations of deflections to the US or to
6 Mexico and we also communicate the threshold limits that we
7 have.

8 So all these details are written out and then
9 based on that the consultant goes ahead and does the
10 modeling.

11 Q Now you said that was -- I believe you said on November
12 the 26th, was that correct?

13 A That is correct, yeah.

14 Q In your experience with the International Boundary and
15 Water Commission, is this kind of back and forth between the
16 commission and whoever the proponent is, is that generally
17 done before construction starts?

18 A Yes.

19 Q All right.

20 THE COURT: And you're saying -- to clarify,
21 you're saying 2-D modeling or 3-D modeling?

22 THE WITNESS: 2-D modeling, Your Honor, yes.

23 THE COURT: All right. 2-D modeling. Why would
24 you -- it seems like this would be three-dimensional
25 analysis?

1 THE WITNESS: It is actually the equations that --

2 THE COURT: It's too hard to do the equations on

3 3-D?

4 THE WITNESS: Okay, Your Honor, let me try to
5 explain. In a 1-D model at ever cross section you have a
6 single water reservation, okay?

7 THE COURT: Sure.

8 THE WITNESS: Okay. In a 2-D model, it's as if
9 you placed a carpet over the (indiscernible) with a grid.
10 So for every grid point you have a water surface elevation.
11 So the water surface elevation can (indiscernible] from one
12 end to the other.

13 In a 3-D model which is generally not used in
14 surface water calculation it is done in, say, some
15 groundwater studies. You also have a (indiscernible). So
16 you have this downstream direction, the trans direction and
17 also in the water, too.

18 THE COURT: But it seems like here, this property
19 that's at issue here is a much lower elevation than the
20 levee wall. So if someone were going to put up a barb-wire
21 fence, that's maybe 3 or 4 feet high and the levee wall is
22 20 feet, that maybe on a 2-dimensional modeling the barb
23 wire fence would cause some issues. But you realize, well
24 there's still 16 feet about that, that the floodwaters will
25 come, whatever issues the barb wire fence might present

1 would be insignificant.

2 THE WITNESS: Actually --

3 THE COURT: So that's why I didn't really
4 understand. It seems like 3-D is important, but no?

5 THE WITNESS: Actually, Your Honor, when you look
6 at the -- one of the outputs that the model generates is
7 something called a particle traction, which is a very nice
8 description of the flow directions and you can stop at
9 anytime stamp and get a time shot of the particle tracking
10 flow directions. When you look at that, you'll find that,
11 you know, the flows going, you know, in both directions, you
12 know. So that is the justification for making a 2-D
13 modeling.

14 THE COURT: And so this 2-D modeling that you say
15 is like a carpet, do you do that modeling, I guess, at the
16 level of the land that you're investigating or seeking to
17 review? I mean is the carpet down at that level. Here
18 would it be done down at the low level of the riverbank?

19 THE WITNESS: It is actually at every grid cell in
20 that carpet it is the ground surface elevation. Okay. So
21 throughout the project, anyway. And what you're doing is,
22 you're getting some roughness values to those points and
23 then the flow -- the flow comes in from the upstream,
24 introduced the front half from the upstream and that spreads
25 around, you know, and goes downstream. So then you see the

1 water surface increasing, you know, and decreasing at every
2 point in this area.

3 THE COURT: And another -- well you mentioned the
4 flood counts comes from upstream that would come from a
5 couple of dams, well no I guess here it's just the Falcon
6 Dam because Anzaldua was downstream from this point.

7 THE WITNESS: Just the Falcon Dam would be the
8 upstream.

9 THE COURT: So Falcon Dam and then above that
10 Amistad?

11 THE WITNESS: Amistad Dam, yes.

12 THE COURT: And so the only -- the flooding that
13 occurs here that happen -- that's part of one of these
14 expert reports 10 years ago, was because there was a
15 controlled water release into the floodway, right?

16 THE WITNESS: Yeah.

17 THE COURT: So if somebody -- who makes that
18 decision? Is that something the International Boundary and
19 Water Commission decides we're going to let so many cubic
20 feet per second go and flood this area?

21 THE WITNESS: Your Honor, we have dam release
22 curves, so depending on the water coming in and the
23 elevation of water in these dams, there are curves that
24 determine how much water has to be released.

25 THE COURT: Okay. All right.

1 I'm sorry I didn't mean to -- I just wanted to
2 make sure where we were there was a dam, I'm trying to
3 understand where all the water would be coming from.

4 All right. You may continue.

5 BY MR. WARNER:

6 Q So, Dr. Uni, when you're looking at the 2-D modeling
7 once it's submitted by the proponent, what is the importance
8 of that under the treaty? What is it under the treaty that,
9 that 2-D modeling is supposed to show you?

10 A In the 2-D modeling -- in any kind of project for that
11 matter, one, the proponent can have an existing condition
12 analysis. The existing condition analysis gives you the
13 water accelerations and velocities as it is today.

14 And then there's a proposed condition analysis
15 where you put in the fence or any other kind of project and
16 then run the model again, with the same geometry with the
17 only change being the new project element. And then you
18 have a new set of water surface elevations and velocities.
19 And once you have these two sets of data then you calculate
20 the impacts -- or the hydraulic impacts.

21 The hydraulic impacts are calculated on the water
22 surface elevation increase which are the proposed condition
23 water surface elevation minus existing condition water
24 surface elevation, and the second and we try to make sure
25 that's below a certain threshold. Okay.

1 In this case, we have levees, so we make sure that
2 it doesn't exceed the decrease of any freeboard which is the
3 distance between the water surface elevation and the top of
4 the levee. And we need to maintain a minimum of three feet
5 of freeboard in order to obtain FEMA levee accreditation.

6 THE COURT: What is that typically now? What is
7 the difference between the levee, the height the top of the
8 levee and the surface water?

9 THE WITNESS: I do not know, Your Honor. But it
10 is supposed to be three feet. And in cases where there are
11 --

12 THE COURT: No. Three feet you said like the
13 highest point of water release in a flood. But I'm saying
14 just every day, if you went out there right now and measured
15 the level top of the Rio Grande versus the height of the
16 levee, is it like 30- 40 feet, what is that height.

17 THE WITNESS: That would be like maybe 25 feet 30
18 feet in the channel and then, you know, the levee height.
19 We look at the --

20 THE COURT: So do you add those? So is it --
21 typically what is it?

22 THE WITNESS: Thirty plus another say ten, fifteen
23 feet, it varies depending on the location.

24 THE COURT: Ah. Sure. Okay.

25 THE WITNESS: Yeah.

1 THE COURT: Typically about 40 feet in total?

2 THE WITNESS: Yeah.

3 THE COURT: More or less? Okay.

4 BY MR. WARNER:

5 Q So, Doctor, the purpose of your modeling is to look not
6 -- is really to look at flood event and what the proponent's
7 project is going to do in flood event, correct?

8 A In a design element and the design is determined by the
9 commission.

10 Q And why is, why is deflection, water deflection in a
11 flood event with the proponent's project inserted into it,
12 why is that so important?

13 A That is one of the elements mentioned in the treaty.

14 Q That what?

15 A In the 1970 boundary treaty. That is each country
16 cannot build projects that diverts, you know, water, extra
17 water to the other country.

18 Q Okay. And is that part of what the 2-D modeling shows
19 you?

20 A Yes.

21 Q All right. So you heard me, summarize to the Court
22 earlier that we were -- that the International Boundary and
23 Water Commission received one 2-D model on December 30th,
24 and the second 2-D model on December 31st, was that correct?

25 A Yes.

1 Q All right. And what is the current status of the
2 IBWC's review of the modeling that's been submitted by
3 Mr. Fisher's people?

4 A The moment we got the model on the 30th, we downloaded
5 the model from the link and, you know, had the model, the
6 model ran to completion without and the errors were very
7 small. Meaning it is -- it ran without errors. Then on the
8 December 31st we got the proposed commission model, we
9 downloaded that model from the link, we ran that model also,
10 and the model ran to completion without errors. Each model
11 run took one hour, so it's, you know, these model runs take
12 different -- long durations because of the number of cells
13 in them.

14 Q Okay. Did you also receive a report?

15 A Yes.

16 Q All right. And then you've had a chance to review --
17 or at least to conduct an initial review of that?

18 A Yes. We started the review.

19 Q Okay.

20 A Running the model is just one of the many different
21 steps involved in the review.

22 Q And when you tell the Court that it ran to completion,
23 does that give any indication as to whether the proposed
24 fence from the Fisher group will violate the treaty or not?

25 A No.

1 Q Can you explain to the Court what you mean when you say
2 that the model ran to completion successfully?

3 A It means that the model did not break down in between
4 -- some of these models do, because of instabilities -- and
5 it ran to completion and it produces some kind of an error
6 report or summary and that summary states how much water
7 came in and which water went out. And it gives an error
8 percentage and that was a very small number.

9 Q So is this -- are these models then that you have the
10 ability to analyze?

11 A Yes.

12 Q All right. And then what happens next. Tell the Court
13 what is the next step in IBWC analysis of these models?

14 A Well when we receive these kinds of models there are
15 many components within the models such as an inflow
16 hydrograph, there are the coefficients in different places.
17 There is the calculation of the have the topographic
18 features been included properly in the model. The analysis
19 of the hydraulic impacts. There are many elements in the
20 model, which are to be looked at carefully and then produce
21 a list of comments. And so this is done for all the
22 projects.

23 Once we produce a list of comments, we email the
24 comments out to the proponent and the proponent responds to
25 these comments. A technical comment is something that may

1 just require clarification, it may require additional
2 analysis, it may require, you know, a better description of
3 something in the report. So it can mean many different
4 things. Some comments are easy to address, some of the
5 comments depending upon the type of products that may be
6 involved and take time to address.

7 It requires time for us to review all these
8 different components of the model, to have an internal
9 discussion, and then list the models -- the comments before
10 sending it out. We don't want to send out comments that are
11 unreasonable and we just want to make sure that whatever the
12 impacts are there properly qualified and they're within the
13 threshold limits.

14 Q I should have asked you this before, but how big is
15 your staff that's actually performing the analysis?

16 A We have two hydraulic engineers, but one is no longer
17 with us, so we have one lead hydraulic engineer, that is
18 Dr. Apurba Borah. And since I have done hydraulics work in
19 the past for many years, I've also been part of the review.
20 So it's two of us.

21 Q And have you prioritized Mr. Fisher's project within
22 the projects that you're reviewing?

23 A Yes. We have prioritized it.

24 Q Are you working on any other projects right now other
25 than the Fisher project?

1 A We are focused on this project. We had staff on
2 vacation, so I was working yesterday reviewing this model --
3 or was it the day before yesterday on January 1st. It was a
4 federal holiday.

5 Q Okay. And when do you anticipate that you and
6 Dr. Borah will have your technical comments ready to be sent
7 to the Fisher group?

8 A We should have the comments -- we plan to have a
9 discussion on Monday, say early next week.

10 Q So early next week let's -- if you could give the Court
11 just a little bit better timeline on that, are you saying
12 Monday for sure, maybe Tuesday?

13 A Let's say Tuesday.

14 Q Tuesday.

15 A Yeah.

16 Q Okay. So you think you can have comments to the Court
17 on Tuesday -- or not to the Court, I'm sorry, to the Fisher
18 Group on Tuesday, and then what happens at that point?

19 A At that point we wait for the comments to be addressed.

20 Q Okay. So then it's back in Mr. Fisher's court?

21 A Yes.

22 Q And in a normal process how long does it normally take
23 a project to get answers back to the comments?

24 A It would take three weeks -- two to three weeks.

25 Q Okay. But if Mr. Fisher and his group are able to get

1 comments back within a day or two can you review those right
2 away?

3 A We anticipate that any comments received, responses to
4 comments received, would not take the same amount of time.
5 We should be able to review them faster.

6 Q Okay. And then at some point you have to confer with
7 the Mexican component of the International Boundary and
8 Water Commission, is that correct?

9 A Yes.

10 Q All right. And how is that controlled? Do you decide
11 when the project is submitted to the Mexican side of the
12 International Boundary and Water Commission?

13 A No. The upper management of the commission decides,
14 you know, when to share the documents with Mexico.

15 Q At this point, do you know when the project that
16 Mr. Fisher has submitted will be allowed to go to the
17 Mexican side for consideration?

18 A At this point, my understanding is once we submit the
19 comments to the proponent and we receive the responses, then
20 at that point we plan to submit the existing proposed
21 condition models, calculations, and report to the Mexican
22 section of the IBWC.

23 Q Okay. So just to be real clear. You're saying you can
24 get comments, your technical comments, out no later than
25 Tuesday, correct?

1 A Mm-hmm.

2 Q Is that a yes?

3 A Yes.

4 Q Sorry. Okay. And then depending on how fast
5 Mr. Fisher's group responds to those comments, at that
6 point, once you've looked at that, you'll be able to send
7 the project proposal to the Mexican IBWC?

8 A Yes.

9 Q Okay. And do you know, as you sit here today, do you
10 know how long the Mexican IBWC will have to review the
11 project?

12 A I do not know.

13 Q Okay. But they -- under the treaty are they allowed to
14 review and make their own comments?

15 A Yes.

16 Q And in your past projects, has the Mexican side of the
17 International Boundary and Water Commission made comments
18 that projects have addressed?

19 A Yes.

20 Q All right. But as you sit here today, do you know if
21 they'll make any comments for Mr. Fisher's project?

22 A I do not know if they'll make any comments or I do not
23 have any idea of what the time frame of their comments.

24 Q Okay. As soon as your review is done and you have
25 conferred with the Mexican IBWC, assuming there's no

1 comments, any additional comments, what happens at that
2 point?

3 A At that point, what happens is the models and the data
4 are from the US section and the Mexican section are conveyed
5 through a letter written by the principal engineer of the
6 engineering department of the US Section. Once the Mexican
7 section concurs that there are no -- they are are fine with
8 it and they don't have any issues, then they'll respond with
9 a similar principal engineer letter saying that by the 1970
10 boundary treaty the Mexican section concurs that there are
11 no impacts. At that point, the US Section commissioner
12 writes a letter to the Mexican Section commissioner and then
13 the Mexican Section commissioner responds back and it is at
14 that point that the realty office issues a letter to the
15 private proponent.

16 Q And would that be a letter of no objection if both
17 sides agree?

18 A Yeah.

19 Q And could you explain to the Court what a letter of no
20 objection means? The letter of no objection means that it
21 is the understanding of the commission that this project --
22 the proposed project, which if constructed as in the
23 documents admitted, would not cause an impact. And there
24 will be some other additional, you know, points in there,
25 that we'd say that the project has to be maintained and

1 there will be some other caveats that we mention in the
2 letter.

3 Q What if a project requires modifications before it can
4 go forward?

5 A Modifications?

6 Q To the design that's being proposed. Do they have to
7 -- do they have to show you the modifications before they
8 can proceed with construction?

9 A Yes.

10 Q And would that also be in a letter form?

11 A Yes.

12 Q And then the third option, as I understand it, is an
13 objection letter, basically objecting to construction?

14 A Yes.

15 Q And does that -- when that letter goes out, the no
16 objection letter, does it actually forbid the construction
17 under the treaty?

18 A Many of the projects that I have seen are projects in
19 which the proponents have addressed the concerns and then
20 there will be no objection letters.

21 THE COURT: So you've never had a project that's
22 been rejected? Out right.

23 THE WITNESS: There will be --

24 THE COURT: Maybe there has -- maybe some
25 modifications, but there's never been on rejected to your

1 memory, right?

2 THE WITNESS: Not that I can recall, Your Honor.

3 THE COURT: Okay. So along this line -- so you
4 issue comments you get responses, lets suppose you're happy
5 with plan, and any modifications to it that the -- of the
6 project the Fisher Defendants propose, and then you -- so
7 then you -- and you're okay with this so then you send it to
8 the Mexican authorities. Let's suppose for whatever reason
9 they say either we don't care, we don't want, you know, we
10 reject your proposed project, even though you have concluded
11 that it is not going to affect in any way this -- the
12 boundaries of the river either regular levels or flood
13 levels. What do you do at that point when you feel like
14 they're unreasonably objecting or withholding approval?

15 THE WITNESS: Then it's a decision for the upper
16 management of the commission and they issue a no objection
17 letter from just the US side.

18 THE COURT: So when you send it to the Mexican
19 authorities you have already determined that it is an
20 acceptable project, right? I mean, you're not going to send
21 it them and say well we don't agree with this, but I'm going
22 to send it your way. I mean, right? That never happens.
23 You only send it when you have concluded it is acceptable?

24 THE WITNESS: That is not correct, Your Honor.

25 THE COURT: Okay. So why would you send one then

1 when it's not acceptable?

2 THE WITNESS: Let me explain that.

3 THE COURT: Sure.

4 THE WITNESS: Typically, you know, for proponent
5 projects there will always be in the case where we confirm
6 that there are no impacts and then send the documents over
7 to the Mexican section. Okay. But what's happened in the
8 past couple of years, there's a lot of CBP projects that are
9 going on, that are emergency projects, and they tend to
10 start construction right away. And in that case, we just
11 receive the 60 percent submittal, for example, and the
12 construction begins. And so at that point, we don't have
13 the time to review and by the time we wait for the
14 90 percent to file a submittal and confirm there are no
15 impacts the project is already constructed. In those cases,
16 upper management decided that we're only going to get the
17 60 percent we send it over to the Mexican section.

18 THE COURT: So why does that system of going
19 forward with the project before you get an approval
20 permitted when it's a government project, but not a private
21 project?

22 THE WITNESS: No. These projects that I'm mention
23 -- that I'm mentioning are on the land involving where the
24 treaty does not apply.

25 THE COURT: They're on what, I'm sorry?

1 THE WITNESS: The land boundary that is on the
2 rest of El Paso where you don't have the river.

3 THE COURT: Okay.

4 THE WITNESS: They're land only projects. Where
5 the fence is three feet off of the boundary. The
6 international boundary between the US and Mexico.

7 THE COURT: So why do you need approval then if it
8 doesn't -- if the treaty doesn't apply to the project? I'm
9 missing something here.

10 THE WITNESS: Well we still review those projects
11 to make sure that there are no adverse hydraulic impacts, or
12 erosion impacts to either country.

13 THE COURT: So the treaty does apply to the
14 project?

15 THE WITNESS: No. The treaty applies only on the
16 Rio Grande.

17 THE COURT: Then why do you send this to Mexico to
18 get their approval?

19 THE WITNESS: What we do there is we submit -- we
20 share to the Mexican section for their information records,
21 we do not resolve their review comments.

22 THE COURT: So like all the fencing that the
23 Government is putting up, let's say right in this area,
24 which has been approved, is that something the treaty
25 doesn't apply to because it's on the levee wall -- or

1 actually it's I guess a little bit off the levee wall.

2 THE WITNESS: That's a slightly different set of
3 -- for those projects, Your Honor, we aren't looking at the
4 deflection and the water surface acceleration increases
5 those kinds of impacts. What we're looking at there is CBP
6 has, for example, built a front wall against our levee and
7 they are placing the bollard frames on top of the flood
8 wall. There we are interested in the structure integrating
9 with the composite structure to make sure that the composite
10 structure still serves the flood protection function and is
11 protecting the land side communities from the Rio Grande
12 floods.

13 THE COURT: So isn't that subject to the treaty?

14 THE WITNESS: No not --

15 THE COURT: The integrity of the levee wall?

16 THE WITNESS: Not because they are not encroaching
17 into the flood plain.

18 THE COURT: But the, from my understanding again
19 this is the Government's in here asking to build a wall is
20 it part of the -- in some areas, I think in coordination
21 with county and city governments there's some reinforcement
22 of the levee wall. Some concrete put in where otherwise I
23 think there was just dirt or other materials on the actual
24 levee wall. Is that not effected by the treaty?

25 THE WITNESS: They are actually cutting into the

1 levee wall and installing the flood wall.

2 THE COURT: Right.

3 THE WITNESS: So they are not encroaching into the
4 floodplain. If they are encroaching into the floodplain
5 beyond the footprint of the levee, then we require hydraulic
6 analysis.

7 THE COURT: Okay.

8 THE WITNESS: And another -- an important
9 component of those reviews of the CBP projects are against a
10 levee, that is a few comments from our operations and
11 maintenance division, because they are the ones who, you
12 know, use the levee. They travel up and down the levee to
13 perform the operations.

14 THE COURT: Besides this project, let's just say
15 in the last year or two, have you ever had any private
16 landowner submit a request to build something on their land
17 in within the floodway?

18 THE WITNESS: There is a power plant I understand
19 -- a solar plant I understand it front in which did not
20 proceed and then there is some development of the Amigo land
21 you know, the Brownsville area where we have explained to
22 the city of Brownsville and to the proponent the need for
23 performing the hydraulic analysis.

24 THE COURT: So in the last few years, you've never
25 had a farmer say, look I'm going to build a trench for

1 irrigation or you've never had somebody who wants to plant a
2 tree in Chimney Park, or I think the city of Mission put up
3 a fence in the last five years around Amistad -- I'm sorry
4 the La Lomita area that's going to maybe the city park did
5 they come to you and say we're putting up a fence, it's in
6 the floodway, send us your LIDAR data we want to give you
7 our information to get approval from you and the Mexican
8 government?

9 THE WITNESS: I do not know, Your Honor.

10 THE COURT: And you've been -- how long have you
11 been there?

12 THE WITNESS: Eight years.

13 THE COURT: So why -- I'm concerned that different
14 people are being treated differently here and so I have
15 these due process concerns about people being singled out
16 and treated differently than other people. So why are these
17 landowners being singled out and treated differently than
18 somebody that you said would also apply to this treaty like
19 a farmer building a trench, a landowner putting up a tree, a
20 city government putting up a fence. Why are those people
21 being -- you don't look at those people? You're not
22 concerned about those people, but you're concerned about
23 this one?

24 THE WITNESS: We require the submittals to be made
25 to the realty department by any project proponent and in

1 some cases, you know, the people -- the proponents are not
2 aware of it, so we reach out to -- we are a small agency,
3 Your Honor, and so we reach out to the city sometimes and
4 say, you know, if somebody's planning to build in the
5 floodplain, please make this part of your building
6 requirement. This one extra step of --

7 THE COURT: All right. I understand you're a
8 small agency, you're not out there patrolling every project.
9 Just curious why this one. It sounds like your saying it's
10 -- you have some manpower limitations that prevent you from
11 policing all these projects?

12 THE WITNESS: Yes, Your Honor.

13 THE COURT: All right.

14 MR. WARNER: Judge, if I could?

15 BY MR. WARNER:

16 Q Dr. Uni, you mentioned CBP, border patrol, and their
17 fence projects. Are you aware of a proposed border patrol
18 fence project from Falcon Dam all the way to the beginning
19 of the levee in Penitas?

20 A Yes.

21 Q And did border patrol actually have to submit modeling
22 for the International Boundary and Water Commission for
23 consideration?

24 A Yes

25 Q And was border patrol forced to adjust its fence

1 location based on how the hydraulic models turned out?

2 A The border patrol made those adjustments in turns they
3 finalized the methodology with us, and they made a submittal
4 -- I think they've made two submittals so far and we have
5 reviewed those submittals, we are still reviewing and seeing
6 if there are any issues. We have shared those submittals
7 with the Mexican section of the IBWC.

8 Q Then there is no levee system from Penitas all the way
9 to Falcon Dam, correct?

10 A Yes

11 Q And so the proposed border fence from there is actually
12 in the floodway or the floodplain of the Rio Grande river,
13 correct?

14 A Yes

15 Q And so that's why they've had to come to the
16 International Boundary and Water Commission -- they being
17 border patrol -- and submit their hydraulic studies and
18 their models so that IBWC can confirm that they don't
19 violate the treaty, is that correct?

20 A Yes.

21 Q All right. And you have reviewed them just as you're
22 reviewing the Fisher project now?

23 A Yes

24 Q Okay.

25 THE COURT: But no private citizen has ever come

1 and done that. I mean, there are homes in this area, sheds,
2 fences for livestock, no private citizen has ever been
3 required to do this to your knowledge, in your eight years
4 there?

5 THE WITNESS: Typically the projects that I have
6 seen come to the engineering services department is projects
7 by irrigation districts on some improvement of their, you
8 know, some levees. CBP projects by municipalities --

9 THE COURT: But no private citizen --

10 THE WITNESS: You know, sometimes private --
11 there's a large private construction of an outlet mall in
12 Laredo, you know, those kinds of projects are the ones that
13 I have seen and the other are these, you know, pipeline
14 projects going under the Rio Grande that is, you know,
15 natural gas, and hydrocarbons.

16 BY MR. WARNER:

17 Q Dr. Uni, is it true that sometimes things get built in
18 the flood plain that IBWC just doesn't know about until
19 after they're built?

20 A Yes

21 Q And what happens at that point?

22 A At that point, I asked this for the legal division, the
23 agency upper management to handle that situation. I don't
24 know what happens.

25 Q The situation that you testified about earlier in Amigo

1 land down in Brownsville, is that some construction that
2 occurred before the International Boundary and Water
3 Commission became aware of it?

4 A Yes

5 Q And then what has happened now that the International
6 Boundary and Water Commission is aware of?

7 A We have notified the city of Brownsville and notified
8 the project proponent and explained to them that we need an
9 existing condition model that evaluates the impacts.

10 Q And are they actually working on that now?

11 A They reached out to us for existing models as I recall
12 and -- yeah.

13 MR. WARNER: Your Honor, at this time, I pass the
14 witness.

15 THE COURT: All right. Who wants it?

16 All right. Proceed for Fisher.

17 CROSS-EXAMINATION OF DR. UNNIKRASHNA

18 BY MR. COURTOIS:

19 Q Can you hear me okay?

20 A Yes

21 Q Dr. Uni?

22 A Yeah.

23 Q Just on that follow up question you were asked about
24 the Brownsville project that got done before there was any
25 permission by the IBWC, do you remember that line of

1 questioning?

2 A Mm-hmm.

3 Q Yes?

4 A Yes.

5 Q All right. So all that the IBWC is done is then
6 require some modeling to see what the impact is from that
7 construction?

8 A Yes.

9 Q All right. So they went ahead and built it and then
10 they're evaluating it afterwards, correct?

11 A Yes

12 Q All right. And you're not telling the Court that
13 everybody who builds in the floodway has to have a 2-D
14 model, are you?

15 A That is correct.

16 Q All right. Sometimes you get projects that are
17 submitted to you with 1-D models and you're fine, you don't
18 require a 2-D model on every project, do you?

19 A Yeah. No.

20 Q All right. And the 1-D model from Fisher was provided
21 to you when?

22 A It was provided on I think November 12th or 13th.

23 Q All right. So we're talking about six weeks ago?

24 A Yes

25 Q All right. What's LIDAR data?

1 A Lidar data is a data that gives you the spacial
2 description elevations of the ground.

3 Q How is that done?

4 A Lidar is -- there is companies that collect the LIDAR
5 data by flights over flights, they collect the data and that
6 is used in the 2-D modeling.

7 Q And so, if I understand it, there's flight that goes
8 over, it shoots a radar down and it can actually get an
9 elevation going through the vegetation all the way to the
10 soil, right? Correct?

11 A That's my understanding, yes.

12 Q All right. And it doesn't work so well on water, does
13 it?

14 A It does not.

15 Q All right. But if you fly over land you can actually
16 get a very detailed elevation of where the land is, correct?

17 A Yes

18 Q All right. Do you deal with LIDAR data?

19 A We don't generate LIDAR data within our agency, we have
20 projects in which we have LIDAR data collection component.

21 Q Sure. You're part of the federal government, right?

22 A Yes

23 Q All right. Does the USGS, do they have LIDAR data?

24 A I believe they have sites with LIDAR data.

25 Q All right. And you know what the LIDAR data is, don't

1 you?

2 A Yes

3 Q All right. And you've been familiar with it for how
4 long?

5 A It's been around for about a couple of decades.

6 Q Sure. And part of your job is you've got to look at
7 elevations, you know that, that's a technology that's been
8 out there, been available and if you needed to access it you
9 probably could access it, correct?

10 a. We could access it. We do not access it often. We
11 have a concern to access it.

12 Q All right. And you first met with Fisher back in you
13 said October of 2019?

14 A Yes

15 Q All right. Did you tell them in October of 2019, we
16 need a 2-D model?

17 A At that point, we didn't know what the project was and
18 a specific location of the project. It is possible that we
19 mentioned this particular project, it is possible. I don't
20 recall. And I said reach out to us and we'll discuss the
21 methodology.

22 Q So did Mr. Fisher give you any kind of documentation
23 about "Hey, we're going to put up a bollard wall," do you
24 know what a bollard wall is?

25 A Yes

1 Q Or a bollard fence. Because other contractors are
2 doing bollard fences in this area, correct?

3 A Yes

4 Q All right. Do you know that there's maybe a square
5 bollard and that it's spaced right next to each other?

6 A Yes

7 Q You know generally what that is.

8 A Yes

9 Q And you knew that back in October of 2019?

10 A Yes.

11 Q So if you were told we're going to put up a bollard
12 fence -- we want to put up a bollard fence here. You knew
13 as an engineer exactly what he was talking about?

14 A Yes

15 Q All right. And at that point you didn't tell him I
16 need a 2-D model, did you?

17 A We were waiting for them to reach out to us about
18 discussing modeling methodology. All we got was the 2 PDF
19 forms.

20 Q How did you meet with them in October of 2019? Didn't
21 they reach out to you and say what do you need from us?

22 A They made a presentation of the concept. Now I don't
23 recall that particular -- this particular reach being the
24 project that is considered. I don't recall that. It's
25 possible that they did, but the way you do that is you reach

1 out to us, we have discussion of methodology and then we
2 proceed with the modeling.

3 Q All right. So where was this meeting in October?

4 A In El Paso -- El Paso headquarters office.

5 Q All right. Your headquarters.

6 A Yes

7 Q Who came?

8 A The commissioner that, as I explained earlier there's a
9 commissioner Jayne Harkins, principle engineer of the head
10 engineering department Jose Nunez, there was the chief of
11 our environmental division that is Jose (indiscernible), and
12 I was there, too.

13 Q And Mr. Fisher was there?

14 A Yes

15 Q And who else, somebody else from Mr. Fisher's?

16 A Mr. Greg Ginch.

17 Q Okay. And what's your understanding as to who
18 Mr. Lynch is?

19 A We told him if he wants to discuss any project reach
20 out to us.

21 Q What's your understanding as to who Mr. Ginch is?

22 A He's a civil engineer.

23 Q Okay.

24 A Yeah.

25 Q You're a civil engineer, right?

1 A Yes.

2 Q You kind of got to have the same expertise, background?

3 A Yes.

4 Q. All right. So Mr. Ginch was there, Mr. Fisher was
5 there and your understanding about the meeting is that they
6 were proposing to build a bollard fence in this area, and
7 they scheduled the meeting with you, didn't they?

8 A Yes.

9 Q All right. They contacted you and said what do we need
10 to do, right?

11 A That is the process was explained to him by principal
12 engineer Jose Nunez.

13 Q I understand. But the purpose of the meeting was for
14 them to say, what do they need from us, so we can move
15 forward, correct?

16 A Yes

17 Q All right. And at that time you didn't say I need a
18 1-D model, I need 2-D model, right?

19 A No.

20 Q You didn't say anything about those right?

21 A No.

22 Q And at some later point you have said all these things
23 along the way, right?

24 A Yes.

25 Q You've required 2-D modeling from other, you know, the

1 CBP, right?

2 A Some CBP, Customs and Border and Protection, yes.

3 Q Right. And so you knew when they were building a fence
4 you wanted it a 2-D model, correct?

5 A Yes.

6 Q And you knew they were building a bollard fence, right?

7 A For more than a decade the agency has required 2-D
8 modeling in the Rio Grande floodplain.

9 Q I understand you want modeling. That's been abundantly
10 clear that you wanted modeling. My question to you is more
11 focused that in October -- early October 2019, did you tell
12 Mr. Fisher, I'm going to need a 1-D model, I'm going to need
13 a 2-D model?

14 A No. We didn't tell --

15 Q You never said anything?

16 A -- we didn't get into that -- we didn't get into that
17 detail we, were just look at the concept from Mr. Fisher and
18 then he told Mr. Greg Grinch, who was present at the
19 meeting, reach out to us, anytime you need us, we have
20 discussions.

21 Q So you didn't say we need this before you can start,
22 you just said reach out to us?

23 A. Yes. That's the way we operate with Customs and Border
24 Protection also. We told them reach out to us, present your
25 methodology and then we have discussions, then after that do

1 the modeling.

2 Q Okay. So did -- I'm not hearing. Did you tell him you
3 needed a 1-D model or a 2-D model --

4 A I did not tell them.

5 Q All right. So when you talk about methodology what are
6 you referring to?

7 A The methodology comes later on, once the project
8 specifics are outlined. One was described to them were the
9 steps required for any project there's a website that has
10 the steps required for any project, and there's a
11 construction criteria and all those details on the website
12 that is a point of contact in our Mercedes office Mr. John
13 Claudio so Principal Engineer Jose Nunez outlined all those
14 steps.

15 Q But am I clear that you didn't say I want 1-D or 2-D
16 modeling back in October?

17 A No. We did not.

18 Q So they had no idea that you needed that back in
19 October?

20 A No.

21 Q The LIDAR data that was ultimately given to
22 Mr. Fisher's companies where did that come from?

23 A We do not have the LIDAR data, you know, collect that.
24 That came from the USGS and we got that downloaded from the
25 USGS that is the latest LIDAR data in 2014. And that my

1 understanding is they aren't able to use it, then a GS
2 person provided the 2011 LIDAR data.

3 Q All right. So that was a phone call that you made to
4 get the LIDAR data?

5 A Yes

6 Q All right. And as simple as that, you got the data and
7 then that was provided to Mr. Fisher?

8 A Yes

9 Q All right. That could have been done back in October,
10 couldn't it have?

11 A Yes

12 Q All right. It wasn't, was it?

13 A No.

14 Q All right. And in fact we had to come to this court
15 and ask for the data from the government from your office,
16 your agency in order to get it, correct?

17 A Yes

18 Q And it was ultimately provided, right?

19 A Yes

20 Q And then 12 days later we get you the 2-D model that
21 you requested?

22 A Yes

23 Q Now on the 2-D model that you were talking about, you
24 said that there were no errors, correct?

25 A Yes

1 Q And that program gives you the ability to check some
2 boxes, look for things, you can run that model on a lot of
3 different ways, can't you?

4 A Yes

5 Q And so all you have to do is, because they put in the
6 data, they took your LIDAR data and they put it in for what,
7 a five-mile stretch? Is that about right?

8 A Yeah.

9 Q Okay. So you can just run that program with all kinds
10 of different variables --

11 A Yes.

12 Q -- to see what happens, correct?

13 A Yes

14 Q And that gives you water elevations doesn't it?

15 A Mm-hmm.

16 Q Gives you water flow? Is that a yes?

17 A Yes. Yes.

18 Q All right. And so you can see the impact or non-impact
19 of a particular structure, right?

20 A Yes

21 Q And that's the difference between the data existing as
22 of this time and then a model based on what you're putting
23 in?

24 A Yes.

25 Q All right. And then you've got a certain assumption,

1 you tell them to assume a certain obstruction, right?

2 A Yes

3 Q All right. So whatever the structure is, and you told
4 Fisher to assume a 30 percent increase in obstruction?

5 A Yes

6 Q All right. Now, you were talking about impact with --
7 impact and that's what the IBWC is looking at, correct?

8 A Yes

9 Q And impact has to do with water elevation?

10 A Mm-hmm.

11 Q Correct?

12 A Yes

13 Q And that has to do with deflection?

14 A Yes

15 Q All right.

16 MR. COURTOIS: Can I approach --

17 THE COURT: You may.

18 MR. COURTOIS: -- Your Honor? Thank you.

19 BY MR. COURTOIS:

20 Q All right. Can you see this --

21 A Yes.

22 Q -- Dr. Uni?

23 A Yes.

24 Q All right. So you recognize the Neuhaus tract as being
25 in this kind of general area right here, right?

1 A Yes

2 Q Where's the levee? Is it up here?

3 A It's up there. Yes.

4 Q All right.

5 THE COURT: You can write on that screen, Doctor.

6 BY MR. COURTOIS:

7 A Yeah.

8 Q Am I pointing correctly to where the levee is so the
9 Court can see it?

10 A Yes

11 Q All right. All right. So we see that, that's the
12 levee, is that where the Border Protection has proposed
13 putting in the bollard fence?

14 A They have fence segments in different regions. They
15 have RGO2, RGO3 so I --

16 Q But you're aware, Dr. Uni, that this area --

17 A That is a segment that they -- yes.

18 Q They propose putting the border fence on top of the
19 levee?

20 A Yes. Yes.

21 Q You just testified about it right?

22 A Yes. Mm-hmm.

23 Q And what they're planning to do is cut away sections of
24 that levee and put up concrete walls, right?

25 A Yes.

1 Q All right. And that's what you were talking about
2 earlier about getting it approved, correct?

3 A Yes.

4 Q Because you want to make sure that structure -- this
5 levee protects all of those structures behind it, right?

6 A Yes.

7 Q This is essentially a big reservoir, isn't it?

8 A Yes.

9 Q Backing up from the dam?

10 A. Yes.

11 Q All right. So when you got a lot of water coming down
12 it's going to hit the dam and it's going to start back
13 flowing isn't it?

14 A Yes.

15 Q You know that from your experience, you know that from
16 other models that you've run, correct?

17 A Yes.

18 Q. And this levee protects all of those properties there,
19 correct?

20 A Yes.

21 Q All right. Now you know that the proposal that
22 Mr. Fisher has done is from the start of the Neuhaus
23 property is right along the border, correct?

24 A Yes.

25 Q And you know that their fence would not cut off what

1 600 acres of property between the river and the fence,
2 right?

3 A Yes.

4 Q All right. So there's a big difference between what
5 the Border Protection has proposed and what Mr. Fisher is
6 proposing, correct?

7 A Yes.

8 Q And there's a competition here. Is it a competition of
9 ideas?

10 MR. WARNER: Objection, Your Honor. Relevance.

11 THE COURT: Yeah. I don't understand the question
12 anyway.

13 BY MR. COURTOIS:

14 Q Well the point is that this is a much different project
15 than that, would you agree with that?

16 A They're projects by two different proponents.

17 Q Right. I understand. And it's different, right?

18 A Yes.

19 Q All right.

20 THE COURT: Doctor, can you draw on your screen
21 where the Fisher proposed fence is going to be if you know?
22 You can use your finger, if you just touch your monitor and
23 draw. Yeah, I believe -- yes. You can just -- or let me
24 and correct me if I'm wrong.

25 Is that about right?

1 MR. WARNER: Yes, Judge.

2 THE WITNESS: Yes. Yeah.

3 THE COURT: Make sure I understand it correctly.

4 All right. Any other --

5 MR. COURTOIS: May I continue?

6 THE COURT: Yeah. You may.

7 MR. COURTOIS: Thank you.

8 BY MR. COURTOIS:

9 Q All right. So let's go back to the LIDAR data from
10 Mr. Fisher for both the previous and the existing and then a
11 post construction model, correct?

12 A Yes.

13 Q And then you also got a report which explains the data,
14 correct?

15 A Yes.

16 Q And you got somebody to put the data in your modeling
17 software, which is a very -- it's not common but it's an
18 open source software, right?

19 A Yes.

20 Q Anybody can get it and. if you've got the data to plug
21 in. you can run the model.

22 A Yes.

23 Q You talked to the Court about no errors in that data,
24 correct?

25 A Yes.

1 Q All right. So it gives you some high degree of
2 confidence in terms of the data that was provided by Fisher?

3 A It gives a degree of confidence on the run of the
4 model.

5 Q Right.

6 A You know, we got to go through a steps of reading the
7 model.

8 Q All right. And so you know what the result of those
9 models are, don't you?

10 A Yes.

11 Q As you sit here today?

12 A Yes.

13 Q All right. So let's talk about what -- we talked about
14 impact. Impact is -- impact deflection toward Mexico is one
15 of your concerns?

16 A Deflection to either Mexico or to the US.

17 Q Correct. And so deflection is one issue?

18 A Yes.

19 Q Water elevation's another issue?

20 A Yes.

21 Q And you know what the model that Fisher gave you
22 between current existing conditions and after construction
23 of this fence even assuming a 30 percent obstruction based
24 on a worst-case flood scenario, right? You know what the
25 results --

1 A Based on the design front, yes.

2 Q Right. You told them to assume and what IBWC uses is
3 the water flow from Hurricane Beulah, right?

4 A Yes.

5 Q All right. And we know what the flow rate was, we know
6 how much water, correct?

7 A Yes.

8 Q And so everybody is supposed to use those assumptions?

9 A Yes.

10 Q And that's what you told Fisher to use, correct?

11 A Yes.

12 Q And you know what the result of that modeling shows,
13 right?

14 A Yes.

15 Q All right. First, what's the tolerance rates for the
16 IBWC? In other words, if the water is going to elevate, how
17 much elevation does the IBC think is not substantial at all
18 and otherwise they would approve the project?

19 A The IBWC for over 10 years on the previous leader
20 engineer as thresholds that they'd be following. And the
21 maximum increase in the water surface elevation is three
22 inches in over the years or six inches in roadway years.
23 This is for non-levee breeches, where you don't have any
24 levees. And every breach if you don't want any water are
25 surfaces to increase at all because we do not want increase

1 in encroachment or decrease of the freeboard.

2 Q All right.

3 THE COURT: I'm sorry, I didn't follow any of
4 that.

5 THE WITNESS: Okay.

6 THE COURT: Your talking about one inch, three
7 inches, farmland, let's talk about within the levee here,
8 what is the --

9 THE WITNESS: We do not want any increase in the
10 water surface elevation, Your Honor, that will decrease the
11 levee freeboard. And so in some cases you can have a levee
12 freeboard that is very a lot in which case we can allow a
13 certain amount of increase in water surface elevation. But
14 we want the levee freeboard to be a minimum three feet in
15 order to --

16 THE COURT: The levee, what? Free bah?

17 THE WITNESS: Freeboard.

18 MR. COURTOIS: I can clear it up, Judge.

19 THE COURT: Okay.

20 MR. COURTOIS: All right. Can I approach?

21 THE COURT: Sure.

22 BY MR. COURTOIS:

23 Q All right. So freeboard really is a term related to
24 the levee, isn't it?

25 A Yes

1 Q All right. And so just to explain to the Court that,
2 if you assume worst-case flood scenario, you want all that
3 water to be at least three feet lower than the top of the
4 levee --

5 A Yes.

6 Q -- correct?

7 A Yes.

8 Q That's call freeboard, right?

9 A Freeboard, yes.

10 Q All right. So in other words, whatever Beulah did,
11 hurricane Beulah did, you want to make sure that this levee
12 has at least three feet above that, correct?

13 A Yes.

14 Q All right. Did you notice any difference in what the
15 prior models have shown is that when the Army Corp looked at
16 this, they said they're going to have to increase the levee,
17 correct? Are you aware of that?

18 A No.

19 Q You're not aware that the Army Corp said that they're
20 going to have to increase the levee?

21 A They may have --

22 THE COURT: Who's they?

23 BY MR. COURTOIS:

24 A -- mentioned that but I don't recall right now.

25 THE COURT: Who's they, CBP and their wall? Their

1 fence, excuse me.

2 MR. COURTOIS: Yeah. Yeah.

3 THE COURT: Okay.

4 BY MR. COURTOIS:

5 Q All right. You're not aware of that?

6 A That doesn't ring a bell right now, okay, sir.

7 Q All right. Are you aware that the Fisher model that
8 they gave to you is a lot more detailed than what you
9 previously have looked at?

10 A It is detailed now based on what we got.

11 Q The 2-D model is very detailed, isn't it?

12 A Yes.

13 Q And it's got a lot of data points, doesn't it?

14 A Yes.

15 Q Which allows for a lot more accuracy, doesn't it?

16 A After review there'd be a --

17 Q Well the model is either accurate or not accurate,
18 right? You're saying you want a chance to review it, I
19 understand that.

20 A Yes.

21 Q All right. Are you aware that their model shows that
22 there's a greater capacity -- the freeboard is actually much
23 greater based on this current more accurate data?

24 A That is mentioned in the report, yes.

25 Q All right. So instead of the prior reports which show

1 a three-foot freeboard, their data shows that existing
2 conditions are at seven feet?

3 A Yes.

4 Q An additional four feet, correct?

5 A Yes.

6 Q And again, that program ran with no errors, correct?

7 A The program ran with no errors, but we are doing the
8 review.

9 Q So the answer is -- the question is -- yes it ran with
10 no errors?

11 A It ran with no errors.

12 Q All right. And so, in the report, there's a discussion
13 of the inches that the water elevated assuming the bollard
14 fence with an increase of 30 percent obstruction, correct?

15 A What was that again? Please repeat the question.

16 Q Yeah. I'm now referring to water elevation --

17 A Okay.

18 Q -- between existing and post, okay. You with me?

19 A Yeah. Mm-hmm.

20 Q And that's the difference between the first model and
21 the second model?

22 A Yes.

23 Q All right. And that second model is bollard fence plus
24 30 percent, correct?

25 A Yes.

1 Q Which is what you asked them to do?

2 A Yes.

3 Q Do you know what the elevation is in the water?

4 A The elevation is given at four to five locations in the
5 table in the report.

6 Q But you know it's 1.2 inches, right?

7 A Yes.

8 Q All right. Which is less than the 6 inches isn't it?
9 That's required -- that's allowed in rural areas, correct?

10 A In a levee freeboard area we do not want any increase,
11 but, yes.

12 Q All right. Well I've got this report here from the
13 Army Corp of Engineer and they said that, that's exactly the
14 data that you told them to use. That the IBWC they were
15 told to assume 6 inches in rural areas, 3 inches in urban
16 areas?

17 A Yes.

18 Q Correct?

19 A In areas without -- it's possible that -- I don't know
20 this report your referring to, but in the levee areas we do
21 not want a decrease in the freeboard of less than 3 feet,
22 because FEMA requires the 3 feet for FEMA levee
23 accreditation.

24 THE COURT: Mr. Courtois, let me. Let's assume
25 the Court is convinced that this is going to pass the

1 analysis whether it would cause some kind of an undue
2 deflection or rise in elevation of water, let's suppose the
3 Court is convinced this is not going to be an issue
4 ultimately with the commission or with Mexico. How do you
5 win?

6 Don't you still have to show that you got approval
7 pursuant to the treaty. I mean, doesn't the treaty require
8 you to jump through that hoop even though you're going to be
9 successful at it, which you haven't yet gotten the approval,
10 do you see what I'm saying? So I've heard all this, let's
11 say I'm convinced, doesn't the Government still win because
12 you actually haven't gotten the approval, it still sounds
13 like it's a couple weeks away?

14 MR. COURTOIS: Well, first of all --

15 THE COURT: Or is this going to be a due process
16 at your being singled no other land owners ever had to do
17 this and they're just picking on you for reasons I don't
18 understand, since the Government's a big proponent of
19 putting up a fence. Go ahead.

20 MR. COURTOIS: Absolutely. There's other
21 construction projects that have been built in the
22 floodplain.

23 THE COURT: So is this going to be a due process
24 argument?

25 MR. COURTOIS: That's one issue. The other --

1 THE COURT: Equal protection kind of a --

2 MR. COURTOIS: -- issue is that the Government has
3 already -- DHS Secretary made a designation of this area --

4 THE COURT: Yeah. But I was --

5 MR. COURTOIS: -- and waived all federal.

6 THE COURT: I understand, but wasn't that -- that
7 really didn't -- I don't think they waived the treaty. They
8 waived every other possible regulation or law that pertain
9 to the construction in this very area of this fence, but I
10 don't know that they waived any treaty requirements. But so
11 and therefore back to my question is, even if this
12 ultimately going to be blessed and approved, which my sense
13 is it's heading that way, doesn't the Government still win
14 at this point until you get the blessing and approval of the
15 Commission?

16 MR. COURTOIS: Well I don't think so. I mean,
17 there's been other projects --

18 THE COURT: Because I'm trying to figure out.
19 We'll let's talk about relevant questions. What more do I
20 need to ask? How do you think you may still win this battle
21 today given that you have not yet gotten the approval, the
22 formal approval?

23 MR. COURTOIS: Well we haven't gotten any
24 objections yet, either. So all of the data -- and that's
25 kind of where I was going -- all of the data indicates that

1 there's no impact by this project.

2 THE COURT: Right. So everybody's going to --

3 MR. COURTOIS: It has no evidence of any impact
4 which is what the treaty talks about, impact. The treaty
5 talks about impact, projects that impact. This project
6 doesn't impact at all.

7 THE COURT: So you're argument would be, we don't
8 need treaty approval this is like the farmer putting up the
9 barbwire fence or the landowner putting up a tree or I don't
10 know like sugar cane farm down here, just planting a sugar
11 cane crop would cause all kinds of I think obstructions of
12 the flow of flood waters. But is that what your arguments
13 going to be? This doesn't even rise to the level of needing
14 IBWC approval?

15 MR. COURTOIS: Well I mean, we've been working
16 trying to get IBWC approval, right?

17 THE COURT: Sounds like it.

18 MR. COURTOIS: And we've been trying to work --
19 the problem is the hoop -- it's like Lucy and the football
20 it keeps -- the goal post keeps getting pushbacked and had
21 they told us back in October that they needed this data we
22 would have given it to them.

23 THE COURT: Sure.

24 MR. COURTOIS: We've been trying to do this and
25 trying to make them happy on everything --

1 THE COURT: Okay. So let's say for the sake of
2 argument they've been making you move the goal post every
3 time, but you still don't have the approval, I mean, is that
4 going to -- and therefore the Government would win by their
5 arguments, even though this may pass with flying colors, you
6 still don't have that approval. That's a --

7 MR. COURTOIS: There's really no approval process.
8 It's they either object or don't object.

9 THE COURT: Okay.

10 MR. COURTOIS: All right. So there's no, like,
11 you have to get this approved by us.

12 THE COURT: Okay.

13 MR. COURTOIS: So it's more along the lines of an
14 objection --

15 THE COURT: Okay. I need to --

16 MR. COURTOIS: -- we have an objection --

17 THE COURT: -- study the law on that. Okay.

18 MR. COURTOIS: I don't -- I think we can move
19 forward -- I mean, we're going to do whatever we need to --

20 THE COURT: Sure. No. I understand.

21 MR. COURTOIS: -- do to finish the project. So
22 the construction of it is such that if we need to we'll post
23 a bond in the event the Government says, "Oh you need to
24 modify this." We can modify the design, we can do all kinds
25 of things. The problem is we've got multiple projects

1 backed up, we've put this off now for quite a while --

2 THE COURT: All right. Well let's go forward, it
3 sounds like maybe you're close to the end here.

4 MR. COURTOIS: Yes.

5 THE COURT: So finish your questioning and then we
6 can talk about what the law and how it might affect your --
7 who prevails here today.

8 BY MR. COURTOIS:

9 Q So I mean, just kind of on that, I don't want to jump
10 through all the hoops again in terms of where we are, but
11 your review of the model, would indicate that there's no
12 impact based on this construction, right?

13 A I cannot say whether the model does not meet -- does
14 not have impacts or does have impacts at this time.

15 Q And so as you sit here today, you have no evidence of
16 any impact on the floodway at all, correct?

17 A I do not have any evidence of impacts or no impacts at
18 this time, we are still doing review.

19 Q I mean, you've been provided with a 1-D model and 2-D
20 model now?

21 A Yes.

22 Q And based on those, you don't have any evidence to come
23 in and say this is going to impact us in anyway.

24 A We haven't seen outputs of deflection calculations in
25 the current submittal.

1 Q And so the answer to my question is, yes, we haven't
2 seen anything yet?

3 A We have not seen evidence of water surface elevation,
4 increases. These are parts of the review comments that
5 you'll be getting. We are still developing those comments.

6 Q Okay. I understand you want to make some more comments
7 about it, and my only question was to you is based on
8 everything you've seen today you don't have any evidence
9 that there is any impact to the floodway, as you sit here
10 today, is that true or not?

11 A I do not want to add what I already said. We are still
12 doing the review. The model ran to completion without
13 errors.

14 Q I understand that --

15 THE COURT: All right. I get it. He said so far
16 hasn't seen anything but he's still looking. Had to work
17 January 1 to start the review and it's only been -- what are
18 we? Today's the 3rd. All right. Any other questions
19 before we pass?

20 MR. COURTOIS: I pass the witness, Your Honor.

21 MALE SPEAKER: Judge, I pass the witness, Your
22 Honor.

23 THE COURT: There's was -- the Neuhaus defendant
24 you want to ask anything?

25 MALE SPEAKER: Not at this time, Your Honor.

1 THE COURT: All right.

2 Any Redirect?

3 MR. WARNER: Can I redirect just briefly, Your
4 Honor?

5 THE COURT: Yeah. Absolutely. You're entitled.

6 REDIRECT EXAMINATION OF DR. UNNIKRASHNA

7 BY MR. WARNER:

8 Q Dr. Uni, when you met with Mr. Fisher on October 3rd,
9 did you receive sufficient project details for you at that
10 point to have a technical discussion with what was going to
11 be required?

12 A What I recall from that meeting is a description of
13 this kind of a project. There was a PowerPoint with a bunch
14 of slides, okay. That had photos, rendering of this kind of
15 a project which is a project on the banks of the Rio Grande
16 and an 18-foot bollard with a pointed top and a roadway
17 beside it. I do not recall, okay. If we look at that
18 PowerPoint, it's possible that this particular beach was
19 (indiscernible) doing that, but in my memory I do not recall
20 whether it's there or not.

21 Q Until you have sufficient details about a project you
22 really can't direct a proponent on what they're going to
23 need, correct?

24 A Yes.

25 THE COURT: Wait, wait, wait, wait a second. So

1 you knew in October this was going to be a bollard fence,
2 18-foot bollards, there was a rendering given to you of it,
3 these people fly all the way to El Paso, I assume you flew
4 to El Paso, your Commissioner's there. This is the same
5 people that have just finished building a wall a few miles
6 up whatever up the border of identical design, what did you
7 not know? What did you think they were going to be doing
8 here other than what they are doing?

9 THE WITNESS: We needed the location, we needed
10 the discussion of the methodology around it, Your Honor.

11 THE COURT: But you know exactly what the bollard
12 fence is going to look like, they give it to you.

13 THE WITNESS: Yes.

14 THE COURT: They have a rendering of it. Did you
15 not understand it was in the floodway? I mean, why did they
16 even meet with you if it's not in the floodway?

17 THE WITNESS: They reply -- at the moment of
18 discussions of lots of segments of these kinds of projects
19 being planned. So we don't know at what location --

20 THE COURT: I think it -- yeah, I find it hard to
21 believe your statement.

22 BY MR. WARNER:

23 Q Did you direct or did Dr. Nunez direct them to the
24 website that would tell Fisher everything that he was going
25 to need for the project?

1 A He mentioned the steps required, yeah.

2 Q Okay. And if Fisher had gone in and looked at those
3 steps would a 2-D model be required?

4 A There is no mention of the 2-D model in our -- in this
5 thing -- in our descriptions.

6 Q So how does -- how does a project know that they're
7 going to need to turn in a 2-D model for your consideration?

8 A We only (indiscernible) in the Rio Grande from the
9 Falcon (indiscernible) that is one reach. Then for
10 additional projects that does in the past by CBP and there
11 have been plans by CBP for the future.

12 Q Doctor, according to your timeline, you let them know
13 on November 26th, or November 15th you received enough
14 information that you let -- or IBWC let Fisher know that
15 they were going to need modeling?

16 A November 26th.

17 Q November 26th.

18 THE COURT: Who told you to let them know?

19 Dr. Uni, who told you to let them know? You've never
20 required 2-D modeling ever except in this little strip
21 between Falcon and Penitas, you've never required of a
22 private citizen 2-D modeling, you have a meeting with these
23 people, they tell you exactly what they're doing, where it's
24 going to be, they show you renderings of it, you don't
25 mention 2-D modeling to them. It's not until November mid-

1 November that this 2-D modeling even is discussed, who tells
2 you, whose brain child was this, who did you hear this from,
3 was it the US Attorneys was it somebody within the Trump
4 administration, was it were you reading Twitter accounts, I
5 mean, why suddenly in November for the first time ever in
6 the history of your eight years there, you're going to
7 require a private citizen to do 2-D modeling.

8 THE WITNESS: The first documents that we
9 received, two document are on November 13th. That is when
10 we got the project details on the one-dimensional modeling
11 on the 13th. So on November 26th is where we developed the
12 methodology and shared it with the proponent.

13 BY MR. WARNER:

14 Q But what did you do on November fifth --

15 THE WITNESS: We've never had -- we've never had
16 this long of project is a 3.5 mile long project just on the
17 bank of the Rio Grande. The concept was presented to us on
18 October 3rd. And the next step is they would come and talk
19 to us about what was required by us.

20 THE COURT: But in October you knew this was the
21 length of the project.

22 THE WITNESS: That was just a presentation of the
23 overall project.

24 THE COURT: Did you know --

25 THE WITNESS: We didn't get into the weeds of the

1 technical part or --

2 THE COURT: Right. I know they didn't give you
3 any technical, but you knew it was a five-mile bollard fence
4 along the banks of the river, you knew that in October.

5 THE WITNESS: Yes, Your Honor.

6 THE COURT: I mean, maybe it was just an innocent
7 oversight, that it wasn't discussed with them, but I just
8 find it hard to believe that you would not have realized
9 then, but then suddenly something changed between October
10 3rd and November. I'm just trying to figure out what
11 changed?

12 THE WITNESS: What changed was we received the
13 first submittal on November 13th and then we knew the exact
14 location. That's when we came to (indiscernible) exact
15 location exactly 3.3 miles upstream from the river's dam and
16 the length of the project. That was the first time we
17 received a one-page document describing the project limits.

18 THE COURT: All right.

19 BY MR. WARNER:

20 Q And then on November 15th how did the International
21 Boundary and Water Commission respond to that plan?

22 A An email was sent saying that we require hydraulic
23 analysis.

24 Q Okay. And then on November 16th did Fisher respond?

25 A Yes.

1 Q And what was Fisher's response?

2 A I believe they requested models from us on November
3 16th and on November 19th we submitted the SMB 2008 example
4 model.

5 Q So on November 13th, Fisher finally submits to you the
6 exact dimensions of what they want to do and where they want
7 to do it. That it's going to be on the Neuhaus tract just
8 up from the Anzalduas dam, correct?

9 A Yes.

10 Q And then from there IBWC moves forward on what
11 additional information it's going to need, correct?

12 MR. COURTOIS: Objection, leading.

13 THE COURT: Sustained.

14 BY MR. WARNER:

15 Q As soon as you received the information on
16 November 13th that you all were waiting for after that
17 meeting on October 3rd, what do you do?

18 A On what was that again? Please, repeat the question.

19 Q You met on October 3rd?

20 A Yes

21 Q They sent you the information that you were expecting
22 on November 13th?

23 A Yes

24 Q What is IBWC do once it receives the information on
25 November 13th?

1 A We distribute it internally and then we send them an
2 email on November 15th, saying that we need detail hydraulic
3 analysis.

4 Q So you began the process that you've described to the
5 Judge now that you have the actual dimensions of what they
6 want to do?

7 A Yes.

8 Q Do you require 2-D modeling at the Amigo land project
9 that you earlier testified about to the Judge?

10 A We haven't discussed that yet. We are still waiting to
11 hear back from the proponent and have discussions on it.

12 Q Did you require 2-D modeling at the outlet mall at
13 Laredo?

14 A We have not received any modeling for Laredo.

15 Q Do you require it?

16 A We have to evaluate that. Most likely we will, but we
17 yet to decide.

18 THE COURT: So the answers no and no. No 2-D
19 modeling in Amigo land, no 2-D modeling at the mall in
20 Laredo.

21 THE WITNESS: It depends upon the width of the
22 floodplain.

23 THE COURT: Right. I mean, I know that those
24 aren't five-mile-long buildings I assume.

25 MR. WARNER: They're probably not three-and-a-half

1 mile long construction.

2 THE COURT: Is that was this is, three and-a-half
3 mile?

4 MR. COURTOIS: Three and-a-half mile, Your Honor.

5 THE COURT: Three. Excuse me, my misstatement.

6 BY MR. WARNER:

7 Q Dr. Uni, you heard from Mr. Courtois that the numbers
8 suggest -- that were submitted to you, suggest that there is
9 minimal impact, is that correct?

10 A That is what is stated in the report, yes.

11 Q All right. But you have to actually check the report
12 to determine if the numbers and the methodology is correct,
13 is that fair?

14 A Yes

15 Q Is that what you're currently doing?

16 A Yes

17 Q So, if we put this in school terms, they've turned in
18 their homework, but you need to grade it now?

19 A Yes.

20 Q And if it's wrong, if there's wrong numbers, then the
21 whole model is wrong, correct?

22 A Then the comments go back to the proponent and then
23 they address the comments and then submit it back to us.

24 Q And that's what you're looking at right now?

25 A Yes.

1 Q And you all have set every single other project aside,
2 so that you can work on this project as quickly as possible,
3 correct?

4 A Yes.

5 Q Now, ultimately, is it you or is it the Commissioner
6 who issues that no objection letter?

7 A My understanding is that it's the commissioner that
8 issues the no objection letter.

9 Q Okay. After you've done your work?

10 A Yes.

11 Q Okay.

12 MR. WARNER: I pass the witness, Your Honor.

13 THE COURT: Well I have a -- so I didn't realize
14 these other projects were out there that apparently a lot of
15 them go on without ever getting approval, so let's just talk
16 about the mall in Brownsville.

17 So it's built, it's done, it's over, now you have
18 some issue with it. Let's suppose that you find that it's
19 objectionable, what do you do then? Does the Government
20 bring some bulldozers and bulldoze it down, I mean, what do
21 you do then? When a project is already completed. And
22 again there were many Border Patrol projects you mentioned
23 -- emergency projects that get completed before the
24 analysis. I mean, what is your plan if it's objectionable?

25 THE WITNESS: If it's objectionable, for example,

1 a CBP project, let's say there is an impact and we let CBP
2 know and then they would install a gate or some other
3 structure to mitigate those impacts.

4 THE COURT: But what about like Amigo land mall,
5 they built this beautiful facility and what wouldn't it --

6 MR. WARNER: So Judge, it's not the Amigo land
7 mall that's the issue. There's brand new construction on
8 Amigo land and that's what he was testifying to. There's a
9 new school and new houses, a neighborhood in Amigo land.

10 THE COURT: That's been completed is the problem.

11 MR. WARNER: That are in the process -- the
12 school's been completed, yes.

13 THE COURT: Okay. Let's suppose you find the
14 school has caused too much deflection or has some other
15 problems that would make rendering objectionable, what's
16 your remedy, what does the commission then do to remedy
17 that?

18 THE WITNESS: I do not know, Your Honor. I know
19 in some cases we have asked for a proponent to remove the
20 buildings.

21 THE COURT: Are you talking about like Border
22 Patrol, I mean, this has never happened to a private citizen
23 you mentioned, so like Border Patrol you've had them remove
24 buildings?

25 THE WITNESS: I think there was some construction

1 built for the Falcon Lake or waterline, but I don't know the
2 details of that project.

3 THE COURT: So you don't recall ever having a
4 situation where somebody already built something and then
5 you had to then make them tear it down or do something else,
6 has that ever happened in your eight years?

7 THE WITNESS: I cannot recall, Your Honor.

8 MR. WARNER: Judge, so Dr. Uni's on the
9 engineering side --

10 THE COURT: Yeah. I know. I understand.

11 MR. WARNER: -- we do have someone here that we
12 can call very quickly to talk about enforcement for the
13 Court so that the Court can understand what the
14 International Boundary and Water Commission does when it
15 needs to enforce.

16 THE COURT: Well, I mean, irreparable harm -- I
17 mean, there are a lot of issues going on here, but again I
18 still feel like we're going to have the issue if they don't
19 have the no objection letter the treaty may require that,
20 what do we do that even if this isn't objectionable, we
21 still seem to have these legal requirements that need to be
22 met, so I don't know that we get there. I am curious what
23 the remedy is when something is built that you later find
24 objectionable that didn't get a permit, but it sounds like
25 that has never ever happened.

1 MR. WARNER: Well, Your Honor, under clause
2 4(b) (2) --

3 THE COURT: Of the treaty?

4 MR. WARNER: -- I mean, the treaty gives them the
5 authority to go in and condemn and tear it down if they have
6 to in order to enforce it.

7 THE COURT: All right.

8 Any other final Recross?

9 MR. COURTOIS: May I --

10 THE COURT: Yes. You get -- everybody gets two
11 chances.

12 MR. COURTOIS: May I approach the witness?

13 THE COURT: You may.

14 RECROSS-EXAMINATION OF DR. UNNIKRASHNA

15 BY MR. COURTOIS:

16 Q I'm showing you what's been marked as Defendant's
17 Exhibit 1 --

18 THE COURT: If you do it from the ELMO, so we all
19 know what you're talking about.

20 MR. COURTOIS: I'm sorry?

21 THE COURT: The document projector, so that I can
22 see it.

23 MR. COURTOIS: Sure.

24 MR. COURTOIS: I have a copy for the Court if you
25 would like it.

1 THE COURT: We've got to get rid of these
2 annotations. There we go. I can zoom. Do you want me to
3 zoom out?

4 MR. COURTOIS: Yes.

5 THE COURT: It's zoomed out as much -- there we
6 go.

7 BY MR. COURTOIS:

8 Q Dr. Uni, does this document look familiar?

9 A Yes.

10 Q All right. That's the first page of the document that
11 was given to you back in October of 2019?

12 A Yes.

13 Q And it's a multi-page document, correct?

14 A Yes.

15 Q This is Defendant's Exhibit 1. There's an explanation
16 of what TGR construction wants to do, correct?

17 A There's a concept, yes.

18 Q All right. This was given to you by Mr. Fisher?

19 A Yes.

20 Q All right. There's some discussion about best land use
21 and so forth in terms of where the Border Protection wants
22 to put a fence and where they're planning to do a fence, do
23 you see that?

24 A Yeah.

25 Q All right. The difference is in the tactical

1 advantage. Do you see kind of the picture right there of
2 what they're --

3 A Yes.

4 Q -- planning to do?

5 A Yes. I saw this.

6 Q All right. You saw this back in October, didn't you?

7 A Yes.

8 Q All right. Again, kind of the speed of construction
9 and how they're planning to do it, correct?

10 A Yes.

11 Q How they put it up, you saw that back in October?

12 A Yes.

13 Q The area -- do you see the area at issue here?

14 A Okay.

15 Q Do you see that?

16 A Yes.

17 Q All right. Would you agree with me that, that's the
18 same area that we're talking about?

19 A It seems a different shape than what we were looking
20 at. It's in that area, yes. It's along their stretch.
21 Yes.

22 Q All right. Can you see a map?

23 A Yeah.

24 Q Does that look familiar?

25 A Yes.

1 Q All right. Same area we're talking about, correct?

2 A Yes.

3 Q That was back in October, correct?

4 A Yes.

5 Q They talked to you about environmental advantages,
6 correct?

7 A Yes.

8 Q Does the border -- the IBWC have any responsibility for
9 protection of the soils around the banks of the river? In
10 other words erosion. Is that one of your concerns?

11 A It is a concern, yes.

12 Q All right. Congress has given you some money to also
13 eradicate the wild Carrizo right?

14 A That is handled by our environmental management
15 division, I don't know about that.

16 Q All right. But you know that IBWC that's one of their
17 roles is to maintain the banks of the Rio Grande, right?
18 Just as a general proposition?

19 A Yes.

20 Q Okay. And you know that Mr. Fisher was proposing a
21 different slope, correct?

22 A Yes.

23 Q All right. And you know as an engineer that a
24 different slope may certainly help erosion and control of
25 the bank and the shore, correct?

1 A Yes.

2 Q And in fact a five to one slope is much better than the
3 current slope that was out there, correct?

4 A Yes.

5 Q You would agree with that?

6 A Yes.

7 Q All right. And that's one of the mandates that IBWC
8 has isn't it? You know that.

9 THE COURT: He mentioned that already.

10 BY MR. COURTOIS:

11 A Yeah we're concerned about erosion.

12 THE COURT: Asked and answered.

13 BY MR. COURTOIS:

14 Q Life span and maintenance. He was talking to you about
15 how they would plan to maintain this, correct?

16 A Yes.

17 Q Back in October. Multiuse ability, talked to you about
18 that back in October, correct?

19 A Yes.

20 Q Did he give you some other considerations? So you knew
21 back in October of 2019 where they were planning to work
22 generally, and what they were planning to do, correct?

23 A Yes.

24 Q And you knew at that point other similar projects you
25 required some models like 2-D model, correct?

1 A Yes.

2 Q But in this case, you never said that to Fisher, did
3 you?

4 A We talked about the concept we waited for detailed
5 discussions.

6 (Pause in proceedings.)

7 BY MR. COURTOIS:

8 Q How long was your meeting back in October of 2019?

9 A I don't know. Maybe a few hours.

10 THE COURT: Oh. Sorry. I switched it.

11 MR. COURTOIS: No, no, no.

12 (Pause in proceedings.)

13 BY MR. COURTOIS:

14 Q Did you have any discussion with Mr. Fisher about the
15 treaties and what was required?

16 A That particular slide was put up.

17 Q Yes.

18 A During the presentation, yes.

19 Q Did you have discussions --

20 A We didn't get into the details, but we said that we
21 require, you know, that the treaty needs to be followed.

22 Q Okay. All right.

23 MR. COURTOIS: Pass the witness, Your Honor.

24 MR. WARNER: No further questions, Your Honor.

25 THE COURT: Yeah. Everybody had two chances at

1 him. All right.

2 MR. PENA: Your Honor, could we ask a couple
3 questions?

4 THE COURT: All right. Since he was called by the
5 Government, they're not even a party to your case, you
6 didn't mention him, that's why I didn't ask you if you had
7 any questions. But if there's anything you want to clarify?

8 MR. PENA: Yes. Yeah. And it should be pretty
9 short, Your Honor.

10 THE COURT: Do you have any objection to that?
11 Does anybody have an objection to that?

12 MR. COURTOIS: I don't have any have objection to
13 that, Your Honor.

14 MR. WARNER: No, Your Honor. It is what it is.

15 THE COURT: Sure.

16 MR. PENA: Could I approach the map just to move
17 things along?

18 THE COURT: Yeah. You may.

19 DIRECT EXAMINATION OF DR. UNNIKRASHNA

20 BY MR. PENA:

21 Q Doctor, we're dealing with the flow of the Rio Grande
22 during a flood event, that's what you are focusing on --

23 A Yes.

24 Q -- correct? In your study. Now we've got the levees
25 here to contain the water in a flood event from pouring over

1 from the flooded area onto anything up north, correct?

2 A Yes.

3 Q Now during those flooding events we're not -- the flow
4 of the river is not limited just to this channel, correct?
5 This entire area -- depending on the size of the flood, this
6 entire area is flooded, correct?

7 A Yes.

8 Q And the water is not just flowing here down this path,
9 but flowing all across here --

10 A Yes.

11 Q, -- correct?

12 A Yes

13 Q So if we have a three-and-a-half mile wall here during
14 a flood event, that wall is no longer parallel to the flow
15 as it is under normal circumstances, but now perpendicular
16 to the flow of water, correct?

17 A The flow can be oriented in different directions and it
18 would be a plain yes.

19 Q Okay. And I've seen that 2-D model and it does some of
20 the pictures have little arrows showing the flow of the
21 water --

22 A Yes.

23 Q -- and this become perpendicular during a flood event,
24 correct?

25 A Yes.

1 Q And one of the things that you need to review, as the
2 analogy was used, checking the homework that was submitted
3 to you. You need to make sure that even though that test
4 was without errors that the model is accurate and gives you
5 accurate information to make a decision on, correct?

6 A Yes.

7 Q So does the model of the wall actually resemble the
8 reality of what the wall will be, correct?

9 A Yes.

10 Q Now, what I have seen and of course, I'm a lawyer, not
11 an engineer. It looks like the model that we have is like a
12 60-foot solid section and then 40 feet empty?

13 A Yes.

14 Q Is that what the proposed wall actually will look like
15 in reality?

16 A No. No.

17 Q Okay. So that's one of the things you're going to have
18 to check --

19 A Yes.

20 Q -- because that might not give us an accurate
21 representation of what the effects will be?

22 A Possibly. Yeah.

23 Q Okay. And are we -- your modeling and your evaluations
24 going to determine whether this will increase the elevation
25 which would cause potentially spill over of the levee,

1 correct?

2 A Yes.

3 Q That's one concern.

4 A Yes.

5 Q Second concern is whether it will cause erosion or a
6 change in the course of the river --

7 A Yes.

8 Q -- which would affect the actual boundaries the border
9 between the United States and Mexico, correct?

10 A Yes.

11 Q So if we do have deflection and increase in velocities
12 and I think that's shown in the studies by changes in color
13 -- increase in velocities here and here, if this is worn
14 away, that would then change the boundary between the United
15 States and Mexico, in fact it will be making this part of
16 Mexico the United States?

17 A Yes.

18 Q And vice versa, this little crescent shape here, this
19 outflow here, that is once -- that is an old remnant of a
20 path of the river. The river used to run through there,
21 correct. And because of different flooding events and
22 different who knows why, the course of the river changed,
23 correct?

24 A Yes.

25 Q Now is it possible when we have these flooding events

1 and we have this wall creating a perpendicular obstruction,
2 that because of debris, trash, trees, leaves, everything
3 from all over here and here hitting this it creates a solid
4 obstruction causing the water to increase its velocity here
5 and up here and possibly even redirecting the river to take
6 its old path?

7 A Possibly.

8 Q So that would be an incident where the Neuhaus property
9 would now be in Mexico if that were to occur?

10 A Depending on the meandering, yes.

11 Q Okay. And those are the kind of things that you need
12 to review, to see what -- because we're not looking at just
13 one flooding event. If this is proposed to be here, based
14 on what was showed to us, a hundred years, that wall will be
15 here for a hundred years, we have to see what that impact
16 will be for more than just one flood event, correct?

17 A Yes. But we look at the design from here, evaluating
18 the impacts of the design front.

19 Q Okay. And so we would see, oh this will increase the
20 chance of erosion here, increase the chance of the river
21 jumping here, increase erosion on the banks of any of the
22 river here that are effected, correct?

23 A We will be reviewing many of those kinds of details,
24 yes.

25 Q Okay.

1 MR. PENA: Thank you. Pass the witness, Your
2 Honor.

3 THE COURT: All right.

4 Thank you very much, you may be seated, or you're
5 excused whatever you need -- if you need to go somewhere
6 you're excused.

7 THE WITNESS: Thank you, Your Honor.

8 THE COURT: All right. Did you have another
9 witness?

10 MR. WARNER: Your Honor, if the Court is concerned
11 about due process and enforcement, we have a very quick
12 witness who can address those issues.

13 THE COURT: Yeah. I mean it's -- well it is a
14 concern.

15 MR. WARNER: Okay.

16 THE COURT: This does seem like people are being
17 -- private citizens are being treated differently than
18 non-private than other -- these private citizens are being
19 treated differently than other private citizens. One,
20 obvious thing.

21 Second thing, the Government's being treated much
22 different than private citizens as well, but does it matter.
23 I'm still -- we still seem to have to overcome this
24 requirement under the treaty that you get the no objection
25 letter and so even though perhaps the Government's singling

1 out these private citizens over any others who have ever
2 done anything in this area, maybe it doesn't matter.

3 So if you want to put her on -- is it a she?

4 MR. WARNER: No, Your Honor.

5 THE COURT: It's a he.

6 MR. WARNER: It's Esteban Martinez.

7 THE COURT: I mean if you want to put him on.

8 MR. WARNER: Esteban Martinez, he's one of our
9 local people down here. It will just be very quick but at
10 least the Court can hear we're not --

11 THE COURT: Sure, sure. While we're here, let's
12 go ahead and hear from the gentleman.

13 MR. WARNER: Mr. Smith is going to take this
14 witness, Judge.

15 THE COURT: Sure great.

16 Good morning, well almost afternoon here. If I
17 could get you to raise your right hand and be administered
18 the oath?

19 (Witness sworn.)

20 THE COURT: All right. If you'll be seated over
21 here.

22 DIRECT EXAMINATION OF ESTEBAN MARTINEZ

23 BY MR. SMITH:

24 Q Mr. Martinez will you state your name for us please?

25 A Esteban Martinez.

1 Q And how are you employed?

2 A I'm the regional security officer for the US
3 International Boundary and Water Commission, security
4 services division.

5 Q And do you work in the Falcon Dam lake area?

6 A Regions four and five which is from Laredo to the
7 Coast.

8 Q Okay. And Falcon Dam is an IBWC project, correct?

9 A That's correct.

10 Q And the area around Falcon lake is IBWC project?

11 A Yes. Up to 307 line.

12 Q Okay. And will you describe for the Court what the 307
13 line is?

14 A 307 line is the height that the lake would come to
15 during a flood event.

16 Q Okay. And above the 307 line that means that water
17 would actually top the dam?

18 A That's right, sir.

19 Q Okay. Did IBWC come to the United States Attorney's
20 Office for the Southern District because of the
21 encroachments by private citizens into the 307 line?

22 A Yes, sir. That would be about --

23 Q And there was a Mr. Garcia that we actually filed suit
24 against, correct?

25 A That's correct. Donkey parcel.

1 Q And we call that donkey parcel. And in donkey parcel,
2 what did Mr. Garcia have below the 307 line?

3 A He had not only livestock, but also mobile home, some
4 other sheds, and some equipment.

5 Q Okay.

6 THE COURT: This is upstream from the dam or
7 downstream from the dam?

8 THE WITNESS: Upstream.

9 MR. SMITH: This is upstream.

10 THE COURT: Upstream. Okay.

11 BY MR. SMITH:

12 Q And he actually had irrigation?

13 A Irrigation lines coming from the river into across his
14 property over the 307 line into another property.

15 Q And as a result of that lawsuit, what was Mr. Garcia
16 required to do?

17 A Remove all the equipment and pipes.

18 THE COURT: Well he was stealing water from the
19 lake it sounds like.

20 THE WITNESS: No, Your Honor.

21 THE COURT: No. Okay.

22 BY MR. SMITH:

23 Q What was the -- what was the purpose of the lawsuit?
24 Had he constructed below the 307 line?

25 A He had constructed below the 307 line, Yes, sir.

1 Q And the purpose of the lawsuit was to have him remove
2 those things that he constructed below the 307 line?

3 A That's correct.

4 Q That property was actually his property though, at one
5 time?

6 A At one time. Yes, sir.

7 Q And then the project came along and you can get a
8 license to still use the property from the IBWC, correct?

9 A That's correct.

10 THE COURT: Did he have that license?

11 MR. SMITH: That was my next question.

12 BY MR. SMITH:

13 Q And did he have a license?

14 A He had a license, I think there was a question as to it
15 belonged to him or his grandfather, his grandparents.

16 Q Okay. And was his license for grazing?

17 A Yes, sir.

18 Q And it was not for construction of any?

19 A It was not for construction.

20 Q Okay. On the northwest side of the lake there was a
21 mobile home park?

22 A Yes, sir.

23 Q And there were mobile homes that were encroaching on
24 the 307?

25 A Below 307. Yes, sir.

1 Q And between the IBWC and our office we met with those
2 landowners and what was the result of that?

3 A We met with those landowners, gave them letters that
4 they had to remove their property, which they did.

5 Q Okay. And so the trailer park moved those properties,
6 those trailer homes and sheds that were below the 307?

7 A That's correct.

8 MR. SMITH: That's all the questions I have, Your
9 Honor.

10 THE COURT: So okay, there's like a -- this 307
11 line I assume that's whatever feet or depth or something,
12 but downstream from Falcon, anything in the floodway is off
13 limits, would have to get IBWC approval for construction or
14 modification?

15 THE WITNESS: That's my understanding. Yes, sir.

16 THE COURT: Anything that could possibly interfere
17 with the flow of flood waters within the levees would need
18 to get permission?

19 THE WITNESS: Yes. In fact one time Mission PD
20 came to us wanting to build a range on a floodway, we told
21 them that they couldn't.

22 THE COURT: And so are you involved in this Amigo
23 land problem going on in Brownsville?

24 THE WITNESS: I'm aware of it, sir, but I'm not
25 directly involved with it.

1 THE COURT: Your area's further up the river than
2 that?

3 THE WITNESS: That would be my area, but it's more
4 of a realty issue right now than a security issue.

5 THE COURT: A real issue, a realty?

6 THE WITNESS: Legal issue.

7 THE COURT: It's a legal issue, not security
8 issue. Ah. Okay. And so where does your jurisdiction end?
9 Does it go all the way to the Gulf or do you -- does it end
10 -- somebody said by Beaumont or something?

11 THE WITNESS: It has -- I have regions four and
12 five which is from Laredo, just upstream of Laredo all the
13 way down to the coast. All along the river, our levees, the
14 dams, down to the power plant.

15 THE COURT: Down to what -- what's the point that
16 you -- the terminus of your jurisdiction?

17 THE WITNESS: At the mouth of the river.

18 THE COURT: Okay. So this area that we're talking
19 about here today is all within your jurisdiction?

20 THE WITNESS: Yes, sir.

21 THE COURT: So there are -- well there's mobile
22 home parks, there's other structures within this area, why
23 aren't you out there getting these people to remove their
24 property?

25 THE WITNESS: Those areas that we are aware of, we

1 do contact the people that are involved. There are some
2 areas like for example Anzalduas park that you mentioned
3 before, that goes before my time. It's my understanding
4 that some of those things were grandfathered. I'm not
5 involved in that. However, because of this we are going to
6 relocate some of those issues.

7 THE COURT: I mean, these clubs --

8 THE WITNESS: Yes, sir.

9 THE COURT: -- they were all rebuilt after the
10 flood, Hurricane Alex flood. I mean, they destroyed all
11 these things, they rebuilt these large structures here in
12 this area.

13 THE WITNESS: That was before my time sir, I can't
14 answer.

15 THE COURT: How long have you been there?

16 THE WITNESS: Seven years.

17 THE COURT: I mean, you can just see
18 (indiscernible) a lot of structures and things that have
19 been built within the levee wall and you don't -- it's not
20 your jurisdiction to go out there, knock on the door and say
21 hey sorry you've got to take all this down --

22 THE WITNESS: I'm in between Laredo and the coast.

23 THE COURT: This is between the Laredo and the
24 coast.

25 THE WITNESS: Yes. But I've got all that area for

1 myself.

2 THE COURT: Well why aren't you asking your legal
3 department --

4 THE WITNESS: As we were aware --

5 THE COURT: -- to file suit on everyone of these
6 people --

7 THE WITNESS: As we come across these --

8 THE COURT: -- and remove all of these properties?

9 THE WITNESS: Yes, sir. As we come across things,
10 in fact we're working on a couple of other issues right now
11 with them. As we run across items, we do bring them up.

12 MR. SMITH: Your Honor, I can call another witness
13 regarding the license for the trailer park there and that La
14 Lomita chapel was there before the levee so it was
15 grandfathered in.

16 THE COURT: Well but the fence was new. When the
17 city -- you know -- I'm conflating two different suits,
18 because I happen to preside over the suit that the
19 Government filed in order to secure access rights to this
20 property and became aware that this is a city park, owned by
21 the city of Mission and they have a beautiful security fence
22 they put up all the way around the property and some gates
23 here all within the flood plain. They've built a structure
24 here, restrooms I believe, they put -- I mean, there's quite
25 a bit of construction that went in recently.

1 THE WITNESS: That's the first time I'm aware of
2 that, sir.

3 THE COURT: Well are you going to head over to the
4 City of Mission and talk to them after you're done here?

5 THE WITNESS: Yes, sir. Thank you.

6 THE COURT: Well I don't want to get them in
7 trouble, so I prefer you not. At least don't say you got
8 the idea from me, please.

9 All right. So I'm just trying to understand what
10 you do. It seems to me no harm no foul, you know, you
11 wouldn't bother somebody if it's pretty obvious they're not
12 going to affect a flooding event. But you don't go out and
13 tell everybody, well look I know you got a whatever barn
14 here but now you've got to do some modeling to make the
15 barns okay? I mean you're not going to -- excuse me -- just
16 go out and do that to everybody.

17 THE WITNESS: I would bring it up to our realty
18 and tell them the area of concern and he would follow up to
19 see if he's got a permit or if that's something that needs
20 to be followed up on.

21 THE COURT: So was the main issue above the 307
22 line, security?

23 THE WITNESS: We got involved because of the
24 issues -- some of the threats from the people in the park
25 toward us.

1 THE COURT: Okay. So what security, there were
2 some people there that were misbehaving possibly?

3 THE WITNESS: They mentioned they had firearms and
4 they were not afraid to use them.

5 THE COURT: So it didn't have anything to do with
6 potential flooding issues did it?

7 THE WITNESS: It would because they're approaching
8 the 307 line. That's where I got involved because we had to
9 go out there and meet with the landowners who had already
10 said that they were very happy with our actions.

11 THE COURT: Okay. All right.

12 MR. SMITH: Your Honor, if I can clear one thing?

13 THE COURT: Yeah.

14 BY MR. SMITH:

15 Q The reason you were involved with us in the project is
16 because Mr. Garcia was a concern as a threat?

17 A Yes, sir.

18 Q Not that the reason the action started against his
19 encroachment had nothing to do with him being a threat, that
20 was why you accompanied everybody out there?

21 A That's correct. For the security.

22 Q Correct. You were observant of that?

23 A Yes, sir.

24 Q Okay.

25 THE COURT: All right. Anything else?

1 MR. SMITH: That's all I have.

2 THE COURT: Anybody have any questions --

3 MR. COURTOIS: I just have a couple.

4 THE COURT: Sure.

5 CROSS-EXAMINATION OF ESTEBAN MARTINEZ

6 BY MR. COURTOIS:

7 Q Who do you work for, sir?

8 A IBWC.

9 Q And you mentioned permit. There's no such thing as a
10 permit is there?

11 A Well I call it a permit, it's --

12 Q You called it a permit.

13 A -- a license for if they've gone through realty to get
14 the proper authorization.

15 Q It's not a license either is it, sir?

16 A Sir, I call it a permit. It's authorization to do
17 something within our jurisdiction.

18 Q Well I want the Court -- you're telling the Court that
19 it's either a permit or a license, it's not either a permit
20 or a license, is it? It's a no objection letter, correct?

21 A Well, wait a minute. There's a couple of differences.

22 Q Okay.

23 A If let's say somebody wanted to do something on our
24 jurisdiction they would have to go through realty and there

25

1 would have to be a permit to do something on the levee. But
2 this -- what this is, is totally different.

3 Q All right. So you're talking about property that the
4 IBWC has control over?

5 A Yes, sir. And I'm not talking about a project this
6 big.

7 Q Okay. You're not talking about private property?

8 A I'm talking about anything on our jurisdiction, on our
9 levee.

10 Q Right. And I just referring my questions about permits
11 and licenses, you're not referring that to private property,
12 correct?

13 A Not private property. Anything that would have to do
14 on our levee.

15 Q Right. I understand. But you kind of use that word
16 permit and license, that doesn't apply to private property,
17 does it?

18 A No. Because the question is, if you want to do
19 something on our levee, you have to approach us to get a
20 permit to do something on our levee.

21 Q And I understand that part.

22 A Okay.

23 Q My question is, on private property you don't need a
24 permit or a license, correct?

25

1 A That I'm -- that's got us into another area that I'm
2 not very familiar with.

3 Q All right. So private property you just don't have any
4 experience with at all?

5 A We have no jurisdiction over private property.

6 Q Thank you.

7 A I mean, my division.

8 THE COURT: All right. Anything else, Mr. Smith?

9 MR. SMITH: No, Your Honor.

10 THE COURT: Mr. Kirby, anything you want to --
11 anybody?

12 (No audible response.)

13 THE COURT: All right. Thank you very much,
14 Mr. Martinez.

15 THE WITNESS: Thank you.

16 THE COURT: Just ask you not to go out to the
17 homeowners in that area as well.

18 So it's noon, Court's been on the bench since 8:45
19 this morning. I'm going to take a brief recess. Just a
20 quick comfort break. We have how many more people,
21 witnesses?

22 MR. WARNER: Your Honor, there's no more from the
23 United States

24 THE COURT: Okay.

25 MR. COURTOIS: I probably have two.

1 THE COURT: Two, brief?

2 MR. COURTOIS: Brief from us.

3 THE COURT: Brief. Okay.

4 MR. PENA: And we have one.

5 THE COURT: Just one. I feel like I really need
6 to get a handle on this even if I'm not convinced that this
7 project's going to be any problem whatsoever to the
8 commission ultimately, does it matter because you still
9 don't have the no objection letters. I don't know if -- it
10 might be helpful to visit with that just in chambers even,
11 so I can get some people researching that just direct some
12 briefing.

13 So I'm going to take a brief recess and I would
14 just ask that you-all meet me in the jury assembly room and
15 kind of go over where we go from here, maybe try to narrow
16 the issues.

17 MALE SPEAKER: Thank you, Your Honor.

18 THE COURT: She'll show you. I'll be back in
19 10 minutes.

20 MALE SPEAKER: Okay.

21 THE COURT: All right. We'll be in recess.

22 COURTROOM DEPUTY: All rise.

23 (Recess taken from 12:03 p.m. to 12:41 p.m.)

24 AFTER RECESS

25 THE COURT: So is Mr. Courtois conferencing with

1 his people?

2 MALE SPEAKER: Your Honor, the CSO let him know
3 that you're back on the Bench.

4 THE COURT: All right. Is he on our floor?

5 MALE SPEAKER: Yeah, he's in the witness room.

6 THE COURT: All right. I gave him permission to
7 confer with his people. I don't know if it's his client or
8 just a representative.

9 So we'll just hear from two witnesses then?

10 MR. PENA: Yes, Your Honor. One from us and one
11 from Defense.

12 THE COURT: One expert and then, sure. I mean,
13 two expert witnesses.

14 (Pause in proceeding.)

15 THE COURT: All right. Mr. Courtois, I was giving
16 you some time. Next Thursday work or not?

17 MR. COURTOIS: It does, Your Honor. But there's
18 a, my client has a couple other issues that I would like to
19 talk to the parties about if that's, if the Court will
20 permit.

21 THE COURT: Okay. You want to do that before?
22 We're going to hear these two witnesses anyway.

23 MR. COURTOIS: It's up to you.

24 THE COURT: You know, you need my assistance in
25 this, I mean?

1 MR. COURTOIS: Yes.

2 THE COURT: Okay. Well then let's, maybe it is
3 more efficient we do it first. Maybe we can streamline some
4 things because one of them was whether your witness could be
5 back next Thursday or not, so.

6 All right. Sorry to pull you all back in here and
7 then back out. Let's try to be very brief. I'm trying to
8 take care of my docket.

9 All right. We'll be briefly in recess.

10 COURTROOM DEPUTY: All rise.

11 (Recess taken from 12:43 a.m. to 12:54 p.m.)

12 AFTER RECESS

13 COURTROOM DEPUTY: All rise.

14 THE COURT: All right. Good afternoon once again.
15 You may be seated. All right, so we're going to hear from
16 two more witnesses then we're going to continue the hearing
17 for final ruling and maybe final evidence for next Thursday.
18 I can do it any time. I don't know what flights are.

19 I'll defer to the Defendants as to the time since
20 the Government offices in this building, I know it will be
21 early. What's a good time to start? Officially use lawyer
22 time, witness time, get you out of here in time to catch
23 flights out of the area.

24 MR. COURTOIS: Well, I guess it's just going to
25 depend what the Governor does on Thursday in terms of all

1 that but.

2 THE COURT: I mean, are you coming in the night
3 before or were you coming in that morning? I just want
4 to -- I try to accommodate out of town lawyers. I mean, we
5 don't have families and commitments back home. If you want
6 to fly in that morning, I can start at a time where you can
7 get from the airport over here.

8 MR. COURTOIS: There are flights that will make it
9 to start at 10:00.

10 THE COURT: At 10:00? Okay. So then we'll just
11 do it at 10:00 a.m. then, next Thursday, January 9th, to
12 finish up this, these hearings in both cases.

13 All right. But some witnesses are here today so
14 we're going to hear from them. There's some, both I believe
15 are engineers or experts of some sorts. Why don't we finish
16 up with the first case and get to Mr. Courtois' witness.

17 MR. COURTOIS: I'm sorry, Your Honor. Our
18 witnesses can be here Thursday.

19 THE COURT: So need for them today.

20 MR. COURTOIS: Yes.

21 THE COURT: Excellent. Okay. Mr. Pena, then you
22 had a witness that you wanted to talk about some geology or
23 hydrology and things like that.

24 MR. PENA: Yes, Your Honor. Mark Thompkins.

25 THE COURT: All right. So that that person

1 doesn't have to be here on Thursday, let's have him step
2 forward.

3 All right. If you could raise your right hand and
4 be administered the oath before you testify.

5 (Witness sworn.)

6 THE COURT: All right. If you could be seated
7 over here. And if I could get you to slide the microphone
8 closer to you so that I can. The chair doesn't move but the
9 microphone does. There we go. Mr. Pena, whenever you're
10 ready.

11 MR. PENA: Thank you, Your Honor.

12 DIRECT EXAMINATION OF MARK THOMPKINS

13 BY MR. PENA:

14 Q Could you state your name for the Record?

15 A Yes. It's Mark Thompkins.

16 Q What is your profession?

17 A I'm an engineering geomorphologist.

18 Q What is that?

19 A It's sort of a fancy way to say that I study the way
20 rivers move water and sediment and debris. And the
21 engineering part is for the way that interacts with the
22 things we build along rivers.

23 Q And what kind of degree do you have in that? Is that a
24 two-year degree, four-year degree?

25 A I have bachelor's and master's degrees in civil

1 engineering. And I have a Ph.D. in environmental planning
2 under a fluvial geomorphologist.

3 Q Okay. So the issues of, the issues we're discussing
4 today, you've heard prior testimony. You were here during
5 Dr. Uni's testimony, correct?

6 A Yes.

7 Q And this is all within your wheelhouse of expertise,
8 correct?

9 A That's correct.

10 Q Now, you have been provided the 1D and 2D models that
11 Fisher ran, correct?

12 A I received the models on New Year's Eve, yes.

13 Q Okay. Now that modeling process and the program that
14 is utilized for that, do you have experience with that?

15 A Yeah. It's a, I'd say a noted, a publicly accessible
16 model. My firm runs that model regularly. I use that model
17 for my research and in much of my work.

18 Q Have you ever done any work for the US Government
19 relating to these issues or that modeling software?

20 A We work with the US Government quite a lot but most
21 often the US Bureau of Reclamation. We have worked with the
22 Corp of Engineers who both the model is developed by the
23 Corp of Engineers and we were actually one of the beta
24 testers of the model.

25 Q So you're very familiar with the mechanics of this

1 model, how it runs, and how it should run. Is that correct?

2 A Yeah. I'm very familiar with this HEC-RAS model as
3 it's called.

4 Q The what?

5 A It's called HEC-RAS.

6 Q What does that stand for, if you know?

7 A Yeah, I do. The HEC is for Hydrologic Engineering
8 Center. That's the Corp of Engineers facility in Davis,
9 California where they developed the model.

10 And then RAS is for River Analysis System. It's a
11 river simulator basically.

12 Q Okay. And what data would you say is required to be
13 input into that model to get accurate results? And what
14 results are we looking at when we run it through this model?

15 A Yeah, so they've run a two-dimensional version of this
16 model. There's a one-dimensional version of the model, too.

17 They require similar inputs. You have to tell the
18 model after you give it information about what the land
19 surface looks like. So high it is and what's covering it.

20 Then you have to tell the model what flow, how
21 much water is coming through. Basically those are the key
22 inputs.

23 Q What about sediment degree, that kind of thing? How do
24 you factor that into the model?

25 A Yeah, so in this case I didn't analyze sediment

1 transport but there is a function within the HEC-RAS
2 modeling platform that allows you to evaluate sediment
3 transport. Typically in rivers like the Rio Grande that
4 move a lot of sediment, that's something you might look at.

5 And there you would need sediment load information
6 that you either have it measured or you get from an agency.
7 Oftentimes agencies along these rivers like the Corp of
8 Engineers or others will measure sediment flow through the
9 river.

10 THE COURT: Would sediment flow be an issue here?
11 I could see where debris but, you know, flood situation.
12 Remember, this river is controlled by a dam just up off the
13 screen here. Flood events, sediment flow?

14 THE WITNESS: Yeah. So here's something my
15 mentor, one of my mentors who was in the Army sort of
16 described the way rivers work. And that's rivers are like
17 wars. They're long periods of boredom with brief moments of
18 terror.

19 And basically what he was referring to there is
20 not only the flow moving through it but the sediment. And
21 in this case, you know, sediment is actually, that's how
22 mountains are formed. That's how the Grand Canyon was born
23 was movement of sediment not just water.

24 And so yes, I, you know, during the high flow
25 that's analyzed in the analysis that's been presented, there

1 would be probably be hundreds of thousands of tons of
2 sediment moving through the system and depositing and
3 eroding as it goes.

4 So it's an important component of the way the
5 river moves.

6 THE COURT: Next question.

7 BY MR. PENA:

8 Q How hard would it be to add that information?

9 A It wouldn't be difficult. The modeling platform is set
10 up to do it if you collect the required input information.
11 Then you would essentially just be pressing run on the
12 modeling software again and looking at a different set of
13 results.

14 Q And how long does it take for the computer, the model
15 to run these? Once you input the data, how long does it
16 take to run that?

17 A Yeah, so I, the way they've got it configured firmly, I
18 did the same thing when I got this, the model from the
19 project proponents. I ran it and it took about an hour on
20 the computer that we use to run models.

21 So another, you probably increase that maybe by
22 twice if you're adding the sediment transport components.
23 So it could take a few hours but it's within hours you would
24 be able to rerun the model with that sediment information.

25 Q And you said that that data is, should be available

1 through agencies or from somewhere?

2 A It varies from river to river and I'm not, I haven't
3 researched that yet on the Rio Grande what's available. But
4 yeah, generally where's there's a flow gauging setup that
5 usually the US Geological Survey maintains where they
6 measure flow, oftentimes they'll measure sediment at the
7 same place.

8 Q Okay.

9 MR. PENA: Could I approach the screen, Your
10 Honor?

11 THE COURT: You may.

12 BY MR. PENA:

13 Q Can you see this screen?

14 A I am seeing the screen on my screen here, yeah.

15 Q Okay. So the two main areas that I want your testimony
16 on is the National Butterfly Center.

17 MR. PENA: And just to correct something that I
18 said earlier, Your Honor, there is in fact three tracts. I
19 was thinking of just one down here and one up here but the
20 northern area above the levy is separated into two small
21 tracts. So, yes, you were correct. There is three tracts
22 and then two tracts here.

23 THE COURT: All right.

24 MR. PENA: So I just wanted to clarify that.

25 BY MR. PENA:

1 Q But we have the National Butterfly Center, Doctor, that
2 extends from above the levy down to right here, comes up to
3 the Rio Grande River. Correct?

4 A That's what I'm aware of, yes.

5 Q And then we have the Neuhaus property which we will,
6 the proposed project is a bollard fence all along the
7 property line and the river bank to the end of the property
8 line, correct?

9 A That's also what I understand, yes.

10 Q The other relevant geographical feature is this levy
11 which is raised earth, creating a barrier between potential
12 floods and the land north of that levy. Correct?

13 A Yeah, the levy is an important piece of the picture for
14 hydrology and hydraulics there.

15 Q Now if you could, if we touched this on this on
16 Dr. Uni's testimony but I wanted to go over with you,
17 Doctor.

18 Now we have this wall that under normal
19 circumstances, normal conditions, is parallel to the flow of
20 the river. Can you explain what happens in flooding events
21 and how this wall that is at one point parallel, what
22 happens to it in a flooding event?

23 A Well, so I can tell you what I see in the modeling
24 results that I've evaluated to some degree. And basically
25 the, can I draw on the screen here? Is that?

1 THE COURT: I believe that I have annotations on.
2 Why don't you try. If not, I'll make sure they're back on.

3 MALE SPEAKER: Your Honor, you should have a red.

4 THE COURT: Is it coming on?

5 THE WITNESS: Just my finger?

6 THE COURT: Yes, just use your finger.

7 THE WITNESS: I'm trying to trace. Well.

8 THE COURT: Let me try yellow. You want to try it
9 now?

10 THE WITNESS: It doesn't seem to register my
11 finger. But the, I would call sort of a, you know,
12 peninsula created by the Rio Grande there, yep.

13 Well, upstream of that even. Yep, there you go.
14 And then around the bend where the Butterfly Center is.
15 Yep, so down through there.

16 As the flow comes up, flows increase during every
17 flood event. It leaves the channel and then flow is
18 basically, you know, directly downstream towards the dam so
19 it would be perpendicular to the alignment of the fence in
20 places along the river there.

21 BY MR. PENA:

22 Q Okay. And so when you're doing this model during flood
23 events, are we only concerned with the flow of water or
24 there other factors like we mentioned before, the sediment?
25 How does that affect the model when it's, when we're dealing

1 with this scenario where we have flood water traveling down,
2 perpendicular to the wall?

3 A Yeah, there's a few things I think that are really
4 important here and a couple of them you see on the screen.

5 So if you can point just to the left of the yellow
6 line there where there's that I would call that an oxbow, an
7 old oxbow. And then again to the right just of the yellow
8 line, up higher, there's another oxbow.

9 And then, so just with those two, those are
10 features of the landscape between levies. It means these
11 thing moves around. It's a dynamic system. It's not fixed
12 in place.

13 And the reason it moves around and to your earlier
14 question, Your Honor, was because the sediment is moving and
15 the interaction of that movement of sediment and the
16 vegetation is changing the way hydraulics move things around
17 and changing the shape of the channel.

18 And so if you were to look, and I did this, if
19 you're to look a little closer at historical conditions,
20 which you can actually do in Google Earth, you'd see that
21 there's been erosion all through that bend and then actually
22 some of that erosion is noted in the project proponents
23 report. They point that out as well.

24 This is an erosive area. This is a sandy, fine-
25 grained area. It moves around. And so when I'm evaluating

1 on any river, when I'm evaluating a structure near a place
2 like this that moves around, the form is not the only
3 component of moving things around.

4 So we would look at the sediment movement and what
5 that's driven by is stress. It's called shear stress. You
6 know, when you push your hand up against the other hand,
7 you're feeling the shear stress.

8 And so that's what the river is doing as it
9 strikes anything. The banks or a fence or an old car body,
10 it's moving that stress to another place if that, if it's
11 hitting something immovable.

12 So you need to be at least taking some
13 consideration of the sediment. You need to also, in a
14 system like this where you have such a high potential load
15 of debris and vegetation from upstream, it would be in my
16 professional opinion it would be sort of standard of
17 practice to evaluate potential scenarios where you have
18 debris clogging.

19 And whenever I work on bridges or water intake
20 structures in rivers, that's always a consideration. Is,
21 you know, how does this go? How is this going to function
22 once we've got debris and trees and stuff hung up on it
23 during our flood flow? It's during those really periods of
24 terror that we have in rivers often in flood conditions.

25 Q I sent you some photos of some bollard fences, border

1 fences. Do you remember those images I sent you?

2 A Yeah, I've seen a number of pictures. There's some too
3 in the documentation I think that comes with the model that
4 they provided.

5 Q Do you have those available to where we could show the
6 Court? I know you have them on your computer.

7 MR. PENA: Your Honor, he show some of those
8 models and some of those videos if he's able to connect his
9 computer to the projector.

10 THE COURT: He can. We usually have lawyers do
11 that before we get started. But we can.

12 MR. PENA: Well, he would need to run it. I don't
13 know if there's a way for him to do it from the witness
14 stand or if he could testify from Counsel table.

15 THE COURT: If he wants to connect a computer to
16 our system, it has to be from one of the ports in the middle
17 of that table or this table. But he'd need a.

18 MR. PENA: We've already, we've connected it, Your
19 Honor. We would just need to have him connect it and turn
20 it on.

21 THE COURT: Sure. Do you want to go over there
22 and turn it on?

23 (Pause in proceeding.)

24 THE WITNESS: Do you want to put that just up on
25 the display there?

1 MR. PENA: Well, let's start with that and then.
2 Well, Your Honor, I guess right now while he's setting that
3 up, I can, if we can use the Elmo?

4 THE COURT: Sure.

5 (Pause in proceeding.)

6 BY MR. PENA:

7 Q Dr. Thompkins, just put up one of the photos I sent
8 you. Is this an accurate depiction of what could happen
9 when debris hits a bollard wall?

10 A Yeah, I think you definitely have debris piling up on
11 any obstruction in the river. Yeah, that's.

12 Q And this would be dead trees, leaves, palm fronds,
13 trash, anything that is carried by the river or flood water,
14 correct?

15 A That's correct, yes.

16 Q And that would impact the flow of water through those
17 bollard walls?

18 A Yes. It changes how water and sediment moves through
19 or along the wall, depending on what's along it, yes.

20 Q And it looks like this would be, this a collection, you
21 know, and you understand that this is not the design of the
22 bollard wall that Fisher is proposing but it's just an
23 example of what could happen with obstruction, with debris?

24 A Yes, I understand that.

25 Q Okay.

1 MR. COURTOIS: Judge, just a word clear. This is
2 not a picture of --

3 MR. PENA: Fisher's product, no. Not at all.

4 MR. COURTOIS: So it's not representative of that.
5 So it's just --

6 THE COURT: A demonstrative.

7 MR. PENA: Right. It's just an example of debris
8 demonstrative clogging up a fence, a bollard fence.

9 BY MR. PENA:

10 Q And we had another with a height gauge on it. Similar
11 type of scenario, debris going up to about almost four feet
12 in some areas, a little above four feet in others?

13 A Yeah, you can get tremendous amounts of debris moving
14 through a river like the Rio Grande, where there's lots of
15 supply and lots of water to move it.

16 Q Would it be important to consider this type of scenario
17 in the models to give, get an accurate picture of what will
18 happen to surrounding area in a flood event with this kind
19 of project?

20 A Yeah. I think especially for a sort of a life cycle
21 analysis of the entire time that this structure is going to
22 be in place, it's going to experience many floods. We know
23 that.

24 And so when you need to account for the kinds of
25 material loads that would be coming through. So you want to

1 evaluate a range of scenarios that can stand all of what the
2 wall or the structure is likely to experience.

3 Q Okay. Are you able to set up your?

4 A I'm connected here. I don't know if it's projecting.

5 THE COURT: Let me turn it on.

6 BY MR. PENA:

7 Q Could you explain to the Court what we're seeing right
8 now?

9 A Sure. Is it okay if I don't use a microphone?

10 THE COURT: Yeah, I can hear you.

11 THE WITNESS: I can speak loudly. And so I have
12 really a little more than 48 hours to try and analyze the
13 results of a model that I've received.

14 And I haven't done a thorough evaluation but what
15 I, you know, I'm here representing the Butterfly Center and
16 I'm interested and looking to understand the impacts of this
17 proposed structure on their property.

18 And so hopefully while you're able to tell that
19 this is that bend we were talking about earlier. And this
20 on the left-hand side is the existing condition, okay?

21 And this on the right-hand side is their project
22 proponents model. This on the right-hand side is with the
23 proposed fence. And you can sort of see it outlined in the
24 black dots there.

25 And you're seeing first one thing that I was

1 trying to describe earlier which is the gap high flows, how
2 the water is moving perpendicular, right? You can see those
3 narrow arrows that are tracing the backers of the flow
4 across that peninsula.

5 I think the key thing to notice, and this is the
6 main thing I looked for in this first cut. I'm just doing a
7 high level analysis of the modeling results that I've been
8 presented with is do the conditions where the proposed
9 structure is going to go change at all?

10 And, you know, the lighter colors into the blue is
11 lower velocities. The darker colors into the red is faster
12 water. And when you get into the three to four feet per
13 second range in a sand bedded system, that's important.
14 That means you could be moving sand and you could be eroding
15 banks.

16 And what I do see here, and I do have some
17 concerns about the way the proposed fence is constructed in
18 the model, but it's red along here where it's not in the
19 existing condition, right? So that's something to pay
20 attention to.

21 I would expect that something in the US
22 Government's review of the modeling results would be of
23 interest to them. But I look at that and see, you know, it
24 does translate upstream give or take and again at least the
25 first thing they do is go dig a hole in the ground, right by

1 the water's edge and that sand just like the bed of the Rio
2 Grande. And when water comes, it's going to either make
3 that hole bigger or fill it in with more sand.

4 And so that's kind of what happens. Like you
5 shake a heavy rope down at one end, it's going to have
6 implications that ripple up through that rope. And that
7 rope essentially is what's the bank of the river in this
8 case.

9 And so when I see change happening down here, I do
10 wonder and have concerns about how it's going to affect the
11 river up there. And you can't really be definitive at the
12 level of modeling that's been done yet.

13 What we do know is there is, the model does
14 predict some change at the location of the closed fences.

15 Q Now you're saying you can't predict at what the level
16 of modeling. What do you mean by that?

17 A Well, a couple of things that really wasn't touched on
18 earlier. But as far as I can tell on the report, the model
19 isn't calibrated and --

20 Q What do you mean decalibrated (phonetic) of the model?

21 A So remember I said the model is like a river simulator?
22 Like a flight simulator. If you have to test the way that
23 the computer representation of reality is or is not
24 representing reality. So when they do flight simulations,
25 they actually compare it to how a real plane flies.

1 In this case, I don't think that a calibration was
2 done. So we don't actually know if what it's creating is
3 the same as what's actually happening out there.

4 So I think that's a really important piece, that
5 the calibration hasn't been done that needs to be done. The
6 second part, and let me turn something on here. The second
7 part was alluded to earlier. We call it I think a previous
8 doctor called it a mesh or the grid size.

9 So you select this in the model how big you
10 represent, you know, how coarsely you represent reality.
11 Those are pretty big squares. Those are 100 feet by 100
12 feet. So it's hard to, what we usually do is test the size
13 of those and make sure that they're small enough to
14 represent the phenomenon that we're trying to represent.

15 I don't know that that's been done. And I think
16 so those are two just basic model preparation things that
17 probably should be done.

18 The more important things though are they as far
19 as I know haven't modeled sediment transport. So there is
20 an option to do at what's called mobile dead model and that
21 would allow you to see how's the river likely to shift and
22 move based on the presence of this new structure.

23 And I think, you know, really until you do those
24 basic steps, all we can see is that yes, there is change
25 from the addition of a structure in the flood way. The

1 implications of that change are very hard to predict at this
2 point based on modeling that's been --

3 Q Okay. Now going back a little bit to the grid size.

4 So that would, in my mind, I'm seeing it as like pixels on a
5 digital photo. The less pixels you have, the grainier the
6 photo is and the less detail you have. Is that something
7 similar? The smaller you can get that grid, the more detail
8 and more accuracy you will get?

9 A That's correct. Yep.

10 Q Is this program able to run a model with a smaller or,
11 yeah, smaller grid?

12 A It definitely is. Yeah. It just requires more
13 computing time. Each cell in here represents a computation
14 that has to be made by the computer, but computers are
15 really fast. And you can get a stronger computer if that's
16 taking too long. But yeah, you can definitely make the grid
17 size smaller.

18 Q What in your opinion, in your expertise and your
19 experience on running these type of models to determine
20 accurately the affect that this proposed border wall will
21 have, what size of grid should we be using? You said this
22 is a 100 feet by a 100 feet.

23 A Yeah. You know, I think for the questions that I am
24 most concerned about like the Butterfly Center and tracts up
25 here be redirected from here, you know, probably a 20 foot

1 grid would be appropriate. Maybe a little bit bigger, a 20,
2 30 feet.

3 You know, I think if you're working right at the
4 wall here, concerned with really at the wall, you can make a
5 really fine grid and see how flow is likely to be going to
6 through those bollards at different flow conditions.

7 And that's more a design consideration for the
8 fence itself but, you know, I would say for the global
9 picture in this band, I would want to see something like 20
10 to 30 feet.

11 Q In your experience, when you're running these types of
12 models, what are the dangers and damages that you look for
13 generally upstream? What are the potential bad things that
14 can happen?

15 A Yeah. The main thing in geomorphology we call it a
16 nick point. And again, think of the beach, taking the kids
17 to the beach. When you dig a hole, that creates a place
18 where sediment's going move and fill. That sediment's got
19 to come from somewhere and it comes from upstream.

20 So, you know, without having really done any
21 modeling or sediment load or sediment balance calculations
22 that I'm aware of, that had to come out of the banks from
23 somewhere upstream.

24 And so because I'm seeing potentially more erosive
25 conditions, higher velocities here along the proposed fence,

1 I want to make sure that there's not, you know, going to be
2 sediment that needs to come from somewhere else upstream and
3 therefore cause erosion on property that we know that
4 already is susceptible to erosion.

5 Q Okay. Now are you seeing any other potential issues
6 with other neighboring properties, erosion or the river
7 actually changing course, jumping from one?

8 A Yeah. It doesn't really show. Maybe we can jump back
9 to your picture. And this I just, I really just got the
10 report last night so I haven't spent that much time with it
11 so I could be not quite interpreting this correctly.

12 But I believe that the design calls for improved
13 flow out of the north end of the fence and it would fill
14 this differently than it currently fills that.

15 And again, that's, this is a big geomorphological
16 kind of question is how do these river channels form over
17 time and if we're with the fence project, if you're not
18 preferentially shifting the flow of as how the flows come up
19 into this path, then I mean there could be all kinds of
20 implications of that light, you know, deposition within this
21 reach more than we've had in the past or additional erosion,
22 you know, that you've seen here.

23 I think it's called out in the Fisher Report, it's
24 called here as it's adjusting to a major shift in its
25 alignment.

1 So you know, it's really hard to predict that at
2 this stage and I'd really focus just on the bend but those
3 are the kinds of things on a broader scale that could
4 happen.

5 Q Based on your review, now I understand you've only had
6 it, the report last night and the information, the model
7 since New Year's Day. Is there a likelihood that this
8 project, on the modeling and information you've seen, could
9 have a negative impact on the Butterfly Center?

10 A Yeah, I think until I see more information about what
11 the change will be at the fence project, you can't rule out
12 erosion or some other damage that, it could be deposition,
13 different kind of deposition on the land at the Butterfly
14 Center.

15 Q When you say deposition, are you referring to --

16 THE COURT: You said Butterfly Center. The Center
17 is actually on the other side of the levy.

18 THE WITNESS: This part of their land that's
19 between the levee and --

20 THE COURT: This land is owned.

21 THE WITNESS: Yeah. Well, that's off, that is
22 part of the, that is actually the first part of the
23 Butterfly Center and there is features that is utilized by
24 tours in that. So that whole area.

25 THE COURT: All right. I misunderstood. I

1 thought the Butterfly Center was like where the gift shop is
2 and that area.

3 THE WITNESS: Yeah, that's the gift shop area and
4 the offices but the Butterfly Center is the entire property,
5 Your Honor.

6 MR. PENA: And I do have that outlined on my map
7 on my screen, if that would help.

8 THE COURT: Sure.

9 (Pause in proceeding.)

10 MR. PENA: There we go. Your Honor, I think we've
11 got it outlined on his screen if you want to.

12 THE COURT: Sure.

13 THE WITNESS: The purple is the land included in
14 the Butterfly Center's property as far as --

15 THE COURT: All right. Don't move that. I just
16 want to see how it looks here. So this property line it's
17 shown here? Is that it?

18 THE WITNESS: Yes, Your Honor.

19 THE COURT: Yeah, okay.

20 THE WITNESS: Yes. And it goes down along the
21 long river to here and across here.

22 THE COURT: And then it cuts up here. Or right to
23 there, I'm sorry. All right. I have a good understanding
24 now.

25 All right, anything else, Pena?

1 MR. PENA: Yeah. Let me go back to the
2 Dr. Thompson's screen.

3 BY MR. PENA:

4 Q And if you can, I don't want to.

5 A I can go back.

6 Q Yeah, but pull up the model you've got of the wall and
7 I want to talk about the actual computer model of the wall.

8 A Let me zoom in on that, okay? This is the. That's the
9 fence itself up close and all.

10 Q Can you point out to the Court exactly what we're
11 seeing here and what those, what that dotted line is?

12 A So yeah, as I understand it from the model report, the
13 model of the fence is represented is 60 foot block sections
14 and then they're then 40 foot just completely open sections
15 and.

16 Q Do you have an issue as in?

17 A Yeah, that doesn't seem to represent physically what
18 the flow will encounter so. It doesn't seem, I'm not sure
19 why that method was chosen to represent the wall, the fence.

20 Q Is there a way using this software and this modeling
21 software to represent the wall, the proposed wall with the
22 bollards accurately?

23 A It would require making the model finer in this area at
24 least so that you can represent the finer, you know, units
25 than 100 feet but. Yes, there is.

1 Q And how much time and what kind of information would be
2 necessary for that?

3 A They just would have, you know, they have the design of
4 the fence. They would just have to refine the
5 representation of the land surface there so that it's, you
6 know, not 100 foot blocks. It's 10 foot blocks or five foot
7 blocks and then you could have much smaller openings that go
8 all the way along.

9 Q Okay. And would that be a better picture and give the
10 Court a better understanding of what the impact both to
11 neighboring properties and potentially to the border as
12 well?

13 A I don't know about the border and sort of what they're
14 looking for in those modeling results. As I understand
15 that, that's much more just does the water level get any
16 deeper, like a big global picture of the system? So I don't
17 know if it would do any better for that.

18 It would definitely be different and I think more
19 accurate representation of real conditions if you
20 represented it more like it would look like, not the ground.

21 Q Okay.

22 THE COURT: This reflects basically a 60 percent
23 obstruction of the normal water flow?

24 THE WITNESS: Right. If the water doesn't flow
25 like that, right? So it represents, if you're doing just a

1 mass balance, there's like a calculation of how much can
2 move from here to here in some amount of time, okay? That's
3 why I say it might be okay for the border investigation that
4 they're doing.

5 But when you're trying to understand how it's
6 going to erode and then the channel will likely adjust
7 because of that change, that's not how the water's really
8 flowing.

9 It's, you'd want to see because it's really coming
10 much more along the wall and then maybe it's speeding up
11 along that wall because it's smoother there so.

12 Yeah, I think for the questions I would be asking
13 about, you know, its upstream impacts on the channel, I
14 would want it finer and I would want it at a different
15 representation.

16 THE COURT: Okay. And that's possible?

17 THE WITNESS: It is possible, yeah.

18 MR. PENA: Okay. Your Honor, may I approach to
19 get the screen?

20 THE COURT: You may.

21 BY MR. PENA:

22 Q Obviously the report is dealing with elevation of water
23 but my understanding, I believe that was cleared up, also is
24 the other issue that they're dealing with is the shifting,
25 the potential shift of the course of the river because that

1 would shift the border.

2 If we have this wall here and it creates this a
3 slicker surface and increase the velocity which it shows,
4 this red color or orange color shows an increase in
5 velocity.

6 THE COURT: Increasing, yep.

7 BY MR. PENA:

8 Q So if we have that and we have increased velocity, that
9 water hitting a clogged up potentially bollard wall with the
10 water hitting it and coming down here would redirect water
11 and potentially either cut off this inlet here, turning this
12 into the United States or Neuhaus property going to the
13 oxbow on the north and potentially cutting the Neuhaus
14 property and turning the majority of it into Mexico.

15 I understand that you're not making that
16 determination.

17 A Right.

18 Q That's the kind of information we would need to look at
19 and that's why we need an accurate model.

20 A Yeah, I would want to see -- this isn't telling me that
21 it doesn't, the model the way it's set up currently isn't
22 giving me confidence that we're predicting the changes in a
23 really accurate way.

24 And so I would want to see it, a more accurate
25 prediction of the changes so that then, I would then be able

1 to predict more effectively the likely channel changes.

2 That's the fluvial geomorphology part of it is
3 once we know more accurately how the velocities are
4 changing, the shear stresses are changing, then we can
5 extrapolate from there to understand how the channel will
6 adjust.

7 Q Okay. Now I want you to tell the Court exactly why the
8 geography, the type of soil we have in this area is
9 important to these considerations.

10 A So it's very mobile, that's the main thing. It's sand,
11 it's silt, it's fine-grained. You can, when I picked it up
12 this morning, you know, you can rub it around in your hands
13 and it doesn't hold together very well.

14 So high flows move it around and that's important
15 and that's going to change. It will shape the river. And
16 when you put an immovable barrier in the path of flow and
17 sediment, it's going to go somewhere else. It has to.

18 Q And that would include the National Butterfly Center
19 property?

20 A It could definitely include the Butterfly Center up, I
21 mean I think that's the place where currently it's already
22 the most susceptible. You see it the most red up in that
23 bend and so I think based on what I've seen so far, that's
24 where I would expect to see some change related to the
25 change we see at the proposed structure.

1 Q And we're saying some change, is that change erosion
2 and that land being washed away down river?

3 A It has in the past and so I would say it a little more
4 precisely as it could be acceleration of that process. It
5 could be we would be losing land faster than you otherwise
6 would.

7 MR. PENA: Thank you. Pass the witness.

8 THE COURT: Can you, I guess, zoom back out of the
9 picture on the right to where you originally had the two?

10 THE WITNESS: I can. Does that help?

11 THE COURT: Yeah, absolutely. So I'm trying to
12 look at the before and after in the area closest to the
13 property on the Butterfly Center. That before and after, I
14 guess this is, yeah, before and after during a flood.

15 It seems to be identical, the same red mustache-
16 shaped flow there, seems to be the same color, same
17 direction. I don't see any really change there.

18 THE WITNESS: Yep. Yeah, you're doing what humans
19 do which is identify the big patterns. This is one time
20 stamp out of a like seven days' simulation. And this is one
21 flood event. And yeah, it looks similar along the Butterfly
22 Center but remember, this is a, so rivers are conveyers of
23 water and sediment, right?

24 THE COURT: Uh-huh.

25 THE WITNESS: If you change something and if you

1 can see the difference along the proposed structure, that
2 means there is potentially some change happening there.

3 THE COURT: And then this --

4 THE WITNESS: That propagates upstream. It's hard
5 to tell with what we have so far how much that will occur
6 but it propagates upstream.

7 THE COURT: -- and then this area here, red, that
8 means increase the faster flow, right? Red is faster or red
9 is slower?

10 THE WITNESS: Red is faster.

11 THE COURT: Faster.

12 THE WITNESS: You can see the scale on.

13 THE COURT: So you have a lot of red here.

14 THE WITNESS: Yep.

15 THE COURT: But it doesn't look you have as much
16 here. And that's, I mean, like less likely to be a erosion
17 problem, less flow? Is that what, that's what it means?

18 THE WITNESS: I'm not sure what you're.

19 THE COURT: Well, I'm talking about the river
20 jumping. You know, it looks like this is less likely to
21 jump at this bend than without the fence. I'm trying to
22 look at the before.

23 It seems like there's a lot more high velocity
24 water flow in the picture on the left than the high velocity
25 water flow on the right. I mean, maybe not significant. It

1 just seems a little darker on the left.

2 THE WITNESS: Are you asking maybe with the
3 proposed project could there be actually more deposition
4 here because things are a little bit less?

5 THE COURT: Right.

6 THE WITNESS: Is that fair?

7 THE COURT: Right. Less likely.

8 THE WITNESS: But again that's, I mean really, at
9 this stage of evaluation has been done, it should really
10 just, is there a difference between the two? If there is,
11 then this proposed piece of infrastructure has an impact on
12 the river channel because the river channel is sand and will
13 respond.

14 It may not do it the first flood or the second or
15 the third but it will. Eventually it has, it has what it
16 has to, to adjust to the new condition and, you know.

17 THE COURT: Then I don't understand that the
18 hydrology here or the physics. Growing up, I was always
19 told the fastest part of the river is the middle of the
20 river, not the edge.

21 But yet this, you're saying that this is, with
22 this wall here, that's actually speeds up the flow of this
23 river? How does that?

24 THE WITNESS: What there, that's why I say I don't
25 think this is depicting things very accurately but what

1 they're modeling is the condition where you have a bunch of
2 narrow buildings.

3 So think of, you know, kind of forcing things
4 through a funnel. They speed up and they're going to move
5 things around.

6 That's not really the right way to represent it.
7 And so you're missing a lot of what else is going on.

8 THE COURT: Yeah. High pressure, low pressure,
9 sucking the water over the fence, I mean, okay. I was
10 trying to understand it through.

11 THE WITNESS: Through the fence, but. Let me, I
12 think the bigger issue is this could be a complete blockage
13 with reasonable amounts of vegetation, sediment coming down.
14 And that condition hasn't been modeled so.

15 If I were the landowner, I would want to
16 understand, you know, immediately downstream on the, there's
17 a three-mile long structure that's going to be placed, is
18 going to be there forever.

19 What's it going to do over multiple events where
20 it's really hard to manage a structure that big to never get
21 clogged with debris once a flood's happening again. Let me
22 get out of here.

23 THE COURT: All right. Again, like you said,
24 anything will have some effects. I mean, I'm trying to see
25 where is the negative effects on the property owned by the

1 Butterfly Center.

2 I can't see where there's a negative effect on
3 their property. And you know, perhaps this Ben Johnson. He
4 had one property here, at least they're so. Perhaps this,
5 you said might go out here. I'm just trying to understand
6 how would it adversely affect the Butterfly property?

7 MR. PENA: I think we're -- Your Honor -- this,
8 he's already specified that he doesn't think this is a truly
9 accurate model that he is testifying --

10 THE COURT: I understand that, but he's use it is
11 what it is. I mean, based on this information what can you
12 say? He hasn't done his own modeling.

13 MR. PENA: Right. I think what he has testified
14 to is any change will increase erosion in certain areas and
15 increase deposit in other areas which will change. And
16 because of --

17 THE COURT: I mean, even a stick will do that so
18 I'm trying to figure well how is this negatively.

19 MR. PENA: -- actually, so a significant level, a
20 structure that's three and half miles long will cause
21 changes and because the National Butterfly Center is an area
22 of increased flow, it will suffer from the erosion part of
23 the equation.

24 Now the deposit --

25 THE COURT: It has a different, but again so

1 right. You're telling me in a flood event its increased
2 flow is going to have increased erosion without this fence.
3 So with the fence, how is it any different?

4 I mean, how is there a negative impact? It seems
5 they both have an impact but it seems just too visual of
6 what you're showing me substantially similar. That's what
7 I'm just trying to understand.

8 THE WITNESS: Yeah. I mean, we're talking about,
9 I mean you're looking at a big area here and so gen and
10 general it looks similar.

11 THE COURT: Uh-huh.

12 THE WITNESS: But we're seeing difference. The
13 way it's represented out, we're seeing difference along the
14 whole three and a half miles. It's a difference and that
15 change over multiple floods over years is going to have an
16 impact upstream.

17 I think looking at it just at this one snapshot in
18 time not being that different. That's not how we really
19 tend to think and river form and how it changes through
20 time. We think longer term than that and then that's.

21 I think once at this year that is a property
22 someone owns and they are concerned about it being lost to
23 the river more rapidly. That could be an outcome of the
24 hydraulics you're seeing here.

25 THE COURT: Okay. I mean, I just don't see that.

1 That's why I'm trying to get you to explain that. I mean,
2 you're telling me this going to be an area of very high
3 erosion as it currently exists and it's going to remain an
4 area of high erosion even with the addition of a fence.

5 THE WITNESS: And then, yeah, so it's a, it has a
6 high erosion potential. That doesn't mean it erodes every
7 year. If you look back 2013 it did erode a bunch.

8 But then a lot of other years it didn't. And so
9 we're saying is there's a, you know, different conditions
10 and different years and.

11 THE COURT: Hard to know. All right.

12 THE WITNESS: Yeah. It's hard to predict exactly.
13 But creating a place where the sediment needs to go
14 potentially downstream, could have accelerate it where it
15 would come from upstream here.

16 THE COURT: All right. Anybody else, any
17 questions?

18 MR. COURTOIS: I do.

19 THE COURT: Sure. Go right ahead.

20 CROSS-EXAMINATION OF MARK THOMPkins

21 BY MR. COURTOIS:

22 Q Just so I kind of understanding your testimony, you
23 just don't know what impact the Butterfly property is going
24 to have with this fence. Is that fair to say, based on your
25 testimony today?

1 A I know that it will have some redirected impact from
2 the changes that occur in the project area. So no, that's
3 not exactly what I'm saying.

4 Q But you can't tell us what the impact is going to be?

5 A I can't predict that today, no.

6 Q And we know that when the flood conditions happen, the
7 Butterfly property close to the river, it floods, doesn't
8 it?

9 A The part on the river side of the levy does get
10 inundated. That's correct.

11 Q Because this is a reservoir, right?

12 A I would not call this a reservoir. A reservoir
13 typically assumes something that's storing water for long
14 periods.

15 We have I understand the dam downstream operating
16 as a diversion dam. It diverts water into the floodway and
17 then into a irrigation system in Mexico.

18 And so water is still flowing downstream at high
19 flows. It's not the case of like a storage dam or it's a
20 placid lake that has no velocity. This still has, the model
21 shows it still has velocity.

22 Q Sure. But you understand that there's a levy, a levy
23 wall, right?

24 A I do understand there's a levy, yes.

25 Q And that's on the other side where this picture is to

1 the north of this area, right?

2 A Correct, yes.

3 Q Right. And so you got a dam south and you got a levy.

4 So when the water backs up here at the dam, it gets caught

5 between the river or just on both sides of the river and the

6 levy wall. Correct?

7 A The levy and the dam make it deeper than it would

8 otherwise be.

9 Q And it holds water?

10 A I'm not sure what you mean by holds water.

11 Q Well, the purpose of the levy wall is to hold water,

12 right?

13 A It contains water, yes, from going further north.

14 That's right.

15 Q What impact on the Butterfly property, do you just

16 don't know based on any of the analyses you've done?

17 A My expectation is that the downstream condition,

18 boundary condition, affecting the Butterfly property will

19 change.

20 And based on what I see so far in the historical

21 change that's occurred there and the kinds of change we

22 would expect with this type of structure that the most

23 likely outcome would be you would lose sediment from this

24 band at a higher rate than it would have done.

25 Q And it's changed over time anyways without a wall,

1 correct?

2 A It does change over time. That's correct.

3 MR. COURTOIS: Pass on the witness.

4 MR. PENA: I just want a -- okay. Go ahead.

5 MR. WARNER: No questions from me.

6 THE COURT: All right. Redirect or?

7 MR. PENA: Yeah. Just briefly. Just to clarify.

8 REDIRECT EXAMINATION OF MARK THOMPkins

9 BY MR. PENA:

10 Q Your testimony is, based upon your expertise, the
11 history of the river that you've been able to review, the
12 limited information on the border wall that in this scenario
13 with a border wall being potentially clogged up, that you
14 will, we will see an increase in erosion and loss of land at
15 National Butterfly Center?

16 A Yes. If the hydraulics along with post-structure
17 change in a way that our, that indicated this initial
18 modeling are reinforced by improved modeling, yeah, that's
19 what would expect to see. That's correct.

20 Q And again, the model, because we are, because it's up
21 here and it's colorful, we are looking at it a lot but your
22 testimony is it's not calibrated or you can't tell whether
23 it's been calibrated properly?

24 A That's correct, yes.

25 Q There is no sediment calculations concluded in this

1 model?

2 A That's also correct.

3 Q Which would, in your opinion, makes it an inaccurate
4 model, correct?

5 A Yes. For this purpose, correct.

6 Q And it's not an accurate representation of the actual
7 wall structure of the proper proposed wall?

8 A Right. The way the wall is input into the modeling
9 software, I think it's not accurate for the purposes of
10 predicting channel change and sediment transport that will
11 allow to see if you're adjacent landowner.

12 Q And we also don't see the, there's no accurate
13 representation of debris clogging in this model as well,
14 correct?

15 A Not from a by pure hydraulic standpoint, no. The way
16 they are getting at that from a water depth standpoint is
17 with this 60 foot blocked and 40 foot open approach which
18 doesn't really capture the true implementation of the fence
19 as I understand it.

20 MR. PENA: Thank you. Pass on witness, Your
21 Honor.

22 MR. COURTOIS: Nothing further, Your Honor.

23 THE COURT: All right. Thank you for being here,
24 sir. You're excused at this time.

25 THE WITNESS: Thank you.

1 (Witness steps down.)

2 THE COURT: And we need no other witnesses today?

3 MR. COURTOIS: I think we'll reserve until
4 Thursday.

5 THE COURT: All right. So the Court is going to
6 continue the hearing on temporary, request for temporary
7 restraining order in 19-CV-411, North American Butterfly
8 Association with Neuhaus & Sons to Thursday at 10:00 or
9 10:30?

10 MR. COURTOIS: 10:00 would be fine.

11 THE COURT: Thursday, January 9th at 10:00 a.m.
12 Any final witnesses need to be presented at that time.

13 And I'm going to extend the temporary restraining
14 order in 19-CV-403, United States of America versus Fisher
15 Industries etcetera until the close of business on Thursday,
16 January 9th, resetting and, and then resetting the, or
17 continuing the hearing on this preliminary injunction to
18 conclude then at that date, at 10:00 a.m. on January 9th.

19 The temporary restraining order will be continued
20 in its same form excepting the Court is not going to impose
21 a restriction set forth in 8b, which previously prevented
22 some braiding, shaving of the bank, given there's no
23 indication that that's a violates any treaty or has any
24 effect other than a helpful effect on the bank.

25 Therefore I'm going to eliminate that prohibition

1 which we discussed in chambers. Otherwise everything else
2 remains in effect until 5:00 p.m. on January 9th.

3 Again the hearing though at 10:00 a.m., both
4 cases. All right. Thank you all for being here today.
5 You're excused at this time. We'll be in recess.

6 COURTROOM DEPUTY: All rise.

7 (Proceedings adjourned 1:46 p.m.)

8 * * * * *

9 I certify that the foregoing is a correct
10 transcript to the best of my ability due to the condition of
11 the electronic sound recording of the proceedings in the
12 above-entitled matter.

13 /S/ MARY D. HENRY

14 CERTIFIED BY THE AMERICAN ASSOCIATION OF
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17 JTT TRANSCRIPT #61446
18 DATE FILED: JANUARY 13, 2020

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